

**DRILLS FOR THE
NUCLEAR, BIOLOGICAL, CHEMICAL
(NBC) RECONNAISSANCE PLATOON**

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Drills for the Nuclear, Biological, Chemical (NBC) Reconnaissance Platoon

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PREFACE

1. Standardized drills are essential to the platoon leader and the success of the reconnaissance platoon. These drills provide performance measures and a collective set of sequential procedures that, when applied Army wide, will minimize the impact caused by turnover in personnel. These drills are for use by trainers at company, platoon, and squad level. When these drills are performed correctly, they help maintain the unit's training readiness and proficiency. The unit must perform the drills to standard at all times to ensure that they can be performed rapidly and according to established standards.
2. The target audience for this drill book is NBC reconnaissance squads and platoons organized under the following table(s) of organization and equipment (TOE) numbers: 03219F000, 03333L000, 03377L100, 03377L200, 03427L000, and 03457F000.
3. The proponent for this publication is Headquarters (HQ), United States (US) Army Training and Doctrine Command (TRADOC). Submit changes for improving this publication on Department of the Army (DA) Form 2028 and forward to the Commandant, US Army Maneuver Support Center, ATTN: ATZT-DT-WF-C (Chemical Warfighter Division), Fort Leonard Wood, Missouri 65473-8600.
4. Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

Chapter 1

Unit Training

1-1. General. The success of the unit's mission always depends on the ability of its soldiers to execute key actions instinctively and immediately in reaction to a situation or order. Drills are designed to focus on a limited number of key actions that every like unit in the Army must master. Battle drills and crew drills are two types of drills discussed in this document.

a. A battle drill is a collective action executed by a platoon or smaller element without applying a deliberate decision-making process. The action is vital to success in combat or critical to preserving life. The drill is initiated on a cue, such as an enemy action or a leader's simple command, and is a trained response to the given stimulus. It requires minimal leader orders to accomplish and is standard throughout the Army.

b. A crew drill is a collective action that a crew of a weapon system or piece of equipment must perform to use the weapon or equipment successfully in combat or preserve life. This action is a trained response to a given stimulus such as a leader's simple command or the status of the weapon or equipment. It requires minimal leader orders to accomplish and is standard throughout the Army.

c. Battle and crew drills have the following advantages:

(1) They allow teams, squads, and platoons to perform critical tasks automatically because they have been practiced repetitively.

(2) They reduce the communication requirements because soldiers know what they have to do.

(3) They build teamwork.

(4) They save time, energy, and lives.

1-2. Training Guidance.

a. Train as you fight. This drill book is designed and based

upon training principles outlined in the Field Manual (FM) 25-series. Drills are trained using the *talk-through*, *walk-through*, and *run-through* methods. You the trainer, of course, must be a master of the drill to train your soldiers to execute it to the prescribed training standards. You may wish to periodically talk your soldiers through the drill, explaining each soldier's role, and then have them go through the drill slowly, on open ground and correcting mistakes as they go. Whenever possible, train in an environment or similar environment or conditions where the drill is normally trained during combat conditions. Conduct the drill training frequently in mission-oriented protection posture (MOPP) 4. Be tough on yourself and your soldiers. A good team executes training tasks instantly and with precision. Your team will pay a high price if it fails to meet high training standards.

b. Train to standard. Units fight as they are trained. Soldiers remember the last way they performed a task; therefore, soldiers must perform tasks according to established standards that are rigidly enforced by leaders.

c. The commander is the primary trainer. Leaders at all levels are responsible for training their soldiers and units. The unit's success on the battlefield depends on the personal involvement of the unit leaders.

d. Train using current doctrine. Leaders are responsible for knowing and training according to current doctrine.

e. Use performance-oriented training. Units become more proficient in performing tasks by practicing the specific tasks. The majority of a unit's training must involve task performance followed by a thorough after-action review (AAR).

f. Train to sustain individual and unit proficiency. The cornerstone of the drill book is the concept of sustaining unit proficiency. The unit must train, evaluate, and continue to train at all times. Because sustainment of training requires practices and repetition, constant evaluation of these training tasks (drills) is required to identify critical training strengths and weaknesses. Training emphasis must focus both on sustaining skills and correcting identified weaknesses. Training plans allow the leader to

select tasks and groups of tasks to facilitate this training process and reduce planning time.

g. **Train to challenge.** Challenging training builds competence and confidence by developing and sharpening skills. It inspires excellence by fostering initiative, enthusiasm, and eagerness to learn.

1-3. **Battle Focus.** Battle focus drives peacetime training requirements from wartime missions. It guides the planning, execution, and assessment of the unit's training program to ensure that the unit trains as it intends to fight. Battle focus is critical throughout the entire training process. Commanders use it to allocate resources for training based on wartime missions requirements. It helps the commander recognize that a unit cannot attain proficiency to standard on every task because of time or resource constraints. A successful training program is achievable, however, by focusing on a reduced number of mission-essential tasks.

1-4. **Safety Consideration.** Training is conducted on a three-tier basis that includes total chain-of-command involvement. This involves planning, chain-of-command presence, and individual responsibility. Training must be performed to the appropriate training standards. Steps must be developed so that the training can be accomplished in a safe manner. Do not take unnecessary short cuts; those same shortcuts could endanger the safety and lives of the troops. Soldiers must also be aware of the harm that they can cause with their assigned equipment. They must understand what can happen when they take unnecessary risks. The chain of command must be aware of the destruction and harm that units or elements can do to others during all phases of training. Soldiers must realize that combat training normally occurs in dangerous environments and under somewhat dangerous conditions. Leaders should not avoid training because of safety concerns but should train to standard and thereby achieve combat readiness. During the conduct of a drill, all soldiers and leaders must be safety conscious. All observers/controllers (Os/Cs) and trainers have the responsibility to ensure that all training is conducted in a safe manner. Before the beginning of a drill, all personnel should be briefed on specific safety measures to be observed during the conduct of all training exercises.

a. Tier I is the commander's responsibility. It involves validating the structural soundness of the training and evaluation plan from a safety perspective. The commander must consider the arrangement of training, make the program sequential, and conduct a level of training consistent with the abilities of those being trained. Safety-related matters must be addressed by military occupational specialty (MOS).

b. Tier II is the leader's (officer in charge [OIC]/noncommissioned officer in charge [NCOIC]) responsibility. It involves actions to be taken by responsible individuals (leaders, soldiers, civilians, and contractors) during preparation for training and execution of the training plan. At the training site, establish a training safety overwatch; focus on adherence to standards and accident prevention measures. Responsible individuals must know how to balance tasks against training requirements, monitor conditions for safety and health hazards and eliminate or control them, and monitor the welfare of the troops in everything that happens.

c. Tier III is an individual responsibility. This tier applies to everyone. It involves soldiers being "tuned in" to looking after each other and themselves. Establish buddy systems with each soldier charged to keep a safety overwatch on someone else. Stress individual training safety and first-aid responsibilities. Emphasize recognition of unsafe conditions and unsafe acts as well as alertness to human error. Anyone has the authority to halt an action that is inherently unsafe.

1-5. Evaluation Information. Training standards are provided as a part of each drill, and the execution of that drill is the standard for the task step.

a. Evaluation may be either internal or external. Internal evaluations are conducted at all levels and must be inherent in all training. External evaluations are usually more formal and are normally conducted by the next higher HQ.

b. Failure to evaluate each task every time it is executed is a critical weakness. The Army Training and Evaluation Plan (ARTEP) concept is based on simultaneous training and evaluation.

Every training exercise provides the potential for evaluation and feedback. Every evaluation is a training session. To optimize training, trainers and leaders must evaluate training as it is being conducted.

c. Place emphasis on direct on-the-spot evaluations. It is very easy to correct poor performance during drill training. However, in higher-level exercises with outside evaluators, this is usually not as easy to do. The habit of leader evaluation at every level makes the difference. The AARs should be planned at frequent, logical intervals during exercises (usually after the completion of a major event). This is a proven technique that allows you to correct performance shortcomings while they are still fresh in everyone's mind. Also, it gets everyone involved and prevents the reinforcement of bad habits by preventing soldiers from repeating poor performance.

d. *FM 25-3* provides detailed instructions for conducting an AAR. It also provides detailed guidance on coaching techniques during the conduct of training.

1-6. **Feedback.** The US Army Chemical School requests your recommendations for improvement of this drill book. Your feedback will help ensure that this book stays current with new equipment and operational concepts that the chemical soldier will employ in the diverse missions of tomorrow.

Chapter 2

Battle Drills

2-1. Description and Format for Battle Drills. A battle drill is a collective action executed by a platoon or smaller element without the application of a deliberated decision-making process. The action is vital to success in combat or critical to preserving life. Each drill contains the following information:

a. Drill title. This is the name of the drill. It describes the required action.

b. Task. The task is essentially the same as the drill title. It describes or names the task (required action) performed by the unit.

c. Conditions. This describes the situation, condition, or environment under which the task is performed.

d. Standards. Standards identify the terminal objective of the drill. These are identifiable measures of how well the unit is to perform the task. These are actions that indicate how well the drill (task) is executed in terms of results or expected outcome. Standards are short, simple, clear, and observable or measurable for evaluation purposes.

e. Supporting individual tasks. This is a representative list of tasks used to support the completion of the drill (collective task).

f. Illustrations. As required.

g. Setup instructions.

(1) Resources. This consists of TOE assigned personnel and equipment, vehicles, NBC/smoke equipment, communication equipment, and ammunition. It covers all essential items needed to complete the drill (task).

(2) Maps with overlays.

(3) Training site. This describes the training area that the unit will require to successfully conduct the task.

(4) Unit instructions. As required.

h. Talk-through instructions.

(1) **Orientation.** This gives a short explanation of the mission and what the drill is intended to accomplish. The key factor for the success of the drill's completion is that the drill must be accomplished to standard with little or no subsequent decision-making process or orders from the unit leaders. The orientation also gives a brief description of the conditions or situations under which the drill is executed.

(2) **Safety/Fratricide.** The unit must observe all safety measures and precautions outlined in the unit's safety standing operating procedures (SOPs), to include troop safety, protection of equipment, and environmental restrictions while conducting drill training. The unit must also observe all safety directives covered in the appropriate technical manuals (TMs) and FMs.

(3) **Demonstrations (optional).** If another unit (squad/platoon) has successfully performed the drill, that unit may be used to demonstrate the performance of the drill. Explain the critical actions being performed and why these actions are critical and essential to the performance of this training. Ensure that you use all performance measures during the explanation of why this drill is important. After the demonstration, summarize the strengths and weaknesses of the demonstration unit.

i. Explanation information.

(1) Explain the objective of the drill in your own words.

(2) Unit leaders must be able to explain the duties of all soldiers in the squad/platoon. Ensure that everyone knows his duties and responsibilities pertaining to each portion of the drill.

(3) Unit leaders should make a sketch or diagram that explains the action required by each member in the squad/platoon.

(4) Unit leaders must be sure to clarify all unsolved issues and questions of the unit members pertaining to the drill. This is essential before performing the drill. Each member must thoroughly understand the tasks he is to perform during the execution of the drill.

(5) Unit leaders should have each member involved in the drill explain his part of the drill in detail before performing the drill. Unit leaders are to make on-the-spot corrections as required.

j. Walk-through instructions. (Use the same procedures as listed in the talk-through instructions.)

(1) This is the most critical portion of drill training. During this phase of training, unit leaders must move through the task very slowly to ensure that the unit is performing the drill and all of the task steps and performance measures to the standards. Unit leaders must observe the drill participants carefully and make on-the-spot corrections as required. As the unit demonstrates greater proficiency in performing the drill correctly at the slow pace, have them perform the drill at a faster pace; however, never sacrifice safety for speed.

(2) Initiating cue. The initiating cue is either the signal that unit leaders give or a trained response to an enemy action that causes the unit to perform the drill.

k. Task steps and performance measures. These are measurable or observable actions that the unit must perform to the standards to complete the drill successfully.

l. Coaching point. If needed, correct the soldier after he completes a performance measure. Soldiers complete performance measures in sequence and like-numbered performance measures simultaneously.

m. Run-through instructions. (Use the procedures as listed in the talk-through instructions.) The unit leader or trainer should practice the drill with the unit until the unit can perform the drill according to the established standards without the drill book. The initial run-through should be conducted slowly. Soldiers change positions in order to learn all steps and standards in the drill.

n. Perform. When soldiers can perform the drill according to the established standards, unit leaders should evaluate the unit as a whole to determine the unit's proficiency in performing the drill.

2-2. Battle Drill 03-3-D00B2.

TASK: React to Direct Fire/Antitank Guided Missile (ATGM) (03-3-D00B2)

CONDITIONS (CUE): The squad/platoon observes the signature of a weapon or detects rounds impacting against or nearby the vehicle. (The unit receives hostile fire.)

STANDARDS: Upon alert, the squad/platoon returns fire and breaks contact if at all possible. If contact cannot be broken, the unit returns fire at the known or suspected enemy positions and moves out of the area immediately. The squad/platoon requests fire support immediately. All drivers take evasive action immediately while moving out of the target area.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-311-2130	Engage Targets with an M203 Grenade Launcher
	071-326-0510	React to Indirect Fire While Dismounted
	071-326-0513	Select Temporary Fighting Positions
	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
	071-430-0002	Conduct a Defense by a Squad
	441-091-1040	Visually Identify Threat Aircraft
STP 3-54B1-SM	071-311-2130	Engage Targets with an M203 Grenade Launcher
	071-326-0608	Use Visual Signalling Techniques

References	Task Number	Task Title
	071-326-3001	Direct a Driver Over a Terrain Route
	551-721-1360	Drive a Cargo Vehicle on Side Roads or Unimproved Roads
STP 3-54B2-SM	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	071-326-5610	Conduct Movement Techniques by a Squad
	071-410-0019	Control Organic Fires
STP 3-CST (ST)	071-311-2130	Engage Targets with an M203 Grenade Launcher
	071-326-0608	Use Visual Signalling Techniques
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-5610	Conduct Movement Techniques by a Squad
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	071-410-0019	Control Organic Fires
	551-721-1360	Drive a Cargo Vehicle on Side Roads or Unimproved Roads

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources.

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC)/smoke equipment; communication equipment; and ammunition.

b. Maps and overlays.

2. Training Site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad/platoon to select a route that makes use of available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The mission's objective is to rapidly move the squad/platoon out of the enemy line of fire. The squad/platoon's ability to react is critical to its success on the battlefield.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
 - c. The threat is properly identified before returning fire.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. Any squad/platoon member gives the warning; for example, "Missile, left front (right front)!"
2. Vehicle commanders receiving or observing fire alert other vehicle commanders by visual signals or radio.
3. The vehicle commander fires a smoke grenade launcher to conceal movement and obscure the enemy's vision.
4. Immediately on alert from the other vehicle commanders, all vehicle commanders fire in the direction of the enemy.
5. The squad/platoon moves out of the target area to a covered and concealed position.
 - a. If the distance to cover is 50 meters or less, drivers move the vehicles in a straight line to the position as rapidly as possible.
 - b. If the distance to cover is more than 50 meters, drivers take evasive action by—
 - (1) Varying speed.
 - (2) Zigzagging right and left.
6. Vehicle commanders continue suppressive fire while drivers move out of the target area to covered and concealed positions.
7. The squad/platoon leader requests fire support and provides the following information:
 - a. The observer's identification.
 - b. The target location.
 - c. The target description
 - d. The method of engagement.
 - e. The method of fire and control.
8. The unit reports the contact, using the spot report (SPOTREP) format, to the next higher headquarters (HQ).

COACHING POINT: Every member of the squad/platoon must know if the distance to cover is less than or greater than 50 meters.

All members must know what driving technique to use when driving toward cover. Establish platoon rally points.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-3-1044	Collect and Report Enemy/Terrain Information
	03-3-1046	React to Contact
ARTEP 3-219-D60-MTP	03-3-1044	Collect and Report Enemy/Terrain Information
	03-3-1046	React to Contact
ARTEP 3-457-10-MTP	03-3-1046	React to Contact

2-3. Battle Drill 03-3-D00B3.

TASK: React to Enemy Air Attack (03-3-D00B3)

CONDITIONS (CUE): The squad/platoon is moving in a convoy during a tactical road march, and the possibility of enemy air attack is known. The squad/platoon observes or is attacked by enemy aircraft. (The unit receives hostile fire from attacking aircraft or observes an enemy aircraft.)

STANDARDS: The squad/platoon reacts immediately, minimizing casualties and damage. The squad/platoon is able to continue its mission after the contact.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-326-0510	React to Indirect Fire While Dismounted
	071-326-0513	Select Temporary Fighting Positions
	551-721-1359	Drive Vehicle in a Convoy
	551-721-1408	Implement Defensive Procedures When Under Enemy Attack or Ambush in a Truck Convoy
STP 21-24-SMCT	071-326-0608	Use Visual Signalling Techniques
	071-430-0002	Conduct a Defense by a Squad
	071-430-0006	Conduct a Defense by a Platoon
	081-831-0101	Request Medical Evacuation
	121-030-3534	Report Casualties
	441-091-1040	Visually Identify Threat Aircraft

References	Task Number	Task Title
	551-721-3352	Direct Convoy Defense Operations
STP 3-54B1-SM	081-831-0101	Request Medical Evacuation
STP 3-54B34-SM-TG	071-410-0019	Control Organic Fires
STP 3-CST (ST)	071-410-0019	Control Organic Fires
	081-831-0101	Request Medical Evacuation

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources.

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC)/smoke equipment; communication equipment; and ammunition.

b. Maps.

2. Training Site. The training site should provide the following:

a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.

b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.

3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The mission's objective is to react immediately to the enemy air attack, making sure not to "bunch up" on the road. To support this mission or requirement, you must be able to perform this task immediately with very little instruction and guidance.

2. Safety/Fratricide. Ensure that—

a. Drivers are briefed to employ safe cross-country driving procedures.

b. Terrain- and weather-related hazards associated with cross-country movement are identified.

c. Threat aircraft is visually identified before returning fire.

3. Demonstration (optional).

4. Explanation.

a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.

b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.

c. Answer all questions about the battle drill.

d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The unit reacts to an enemy air attack while moving.

a. Air guards warn vehicle commanders of the attacking aircraft.

b. Vehicle operators move their vehicles to the shoulders of the road in a herringbone formation and stop.

c. Vehicle operators maintain a 150-meter interval (terrain permitting) between vehicles and do not "bunch up."

d. Soldiers dismount rapidly, disperse, and take up firing positions.

e. Soldiers immediately return fire if attacked by aircraft or on command (either vocal or visual).

f. All soldiers reload weapons following the engagement.

g. After the air attack has ended, vehicles are reassembled,

casualties are treated and evacuated, damages are assessed, and a situation report (SITREP) is sent to the operational headquarters (HQ).

2. The unit reacts to an enemy air attack while stationary or set up.
 - a. The air attack alarm is passed.
 - b. All available soldiers immediately engage the attacking aircraft.
 - c. All soldiers reload weapons following the engagement.
 - d. After the air attack has ended, vehicles are reassembled, casualties are treated and evacuated, damages are assessed, and a SITREP is sent to the operational HQ.
 - e. The squad/platoon moves/displaces as appropriate.

COACHING POINT: Every member of the squad/platoon must know to maintain the proper interval (terrain permitting) between vehicles and not "bunch up."

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	44-1-C221.03-1018	Take Active Combined-Arms Air Defense Measures Against Hostile Aerial Platforms
ARTEP 3-219-D60-MTP	44-1-C221.03-1018	Take Active Combined-Arms Air Defense Measures Against Hostile Aerial Platforms
ARTEP 3-457-10-MTP	44-1-C221.03-1018	Take Active Combined-Arms Air Defense Measures Against Hostile Aerial Platforms
ARTEP 3-477-10-MTP	44-1-C221.03-1018	Take Active Combined-Arms Air Defense Measures Against Hostile Aerial Platforms

2-4. Battle Drill 03-3-D00B4.

TASK: Use Movement Techniques (Traveling, Traveling Overwatch, or Bounding Overwatch) (03-3-D00B4)

CONDITIONS (CUE): The squad/platoon is moving and the enemy situation is known for each movement technique. (The squad leader uses arm-and-hand or flag signals or a radio to designate the desired technique.)

STANDARDS: The squad/platoon leader selects the proper movement technique according to the enemy situation.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-311-2130	Engage Targets with an M203 Grenade Launcher
	071-326-0510	React to Indirect Fire While Dismounted
	071-326-0513	Select Temporary Fighting Positions
	071-331-0815	Practice Noise, Light, and Litter Discipline
	113-571-1022	Perform Voice Communications
	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	551-721-1363	Drive Vehicle With or Without Trailer/ Semitrailer in Blackout Conditions
	071-326-0515	Select a Movement Route Using a Map
	071-326-0608	Use Visual Signalling Techniques
	071-326-5705	Establish an Observation Post

References	Task Number	Task Title
	071-331-0820	Analyze Terrain
	441-091-1040	Visually Identify Threat Aircraft
STP 3-54B1-SM	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-5502	Issue a Fragmentary Order
	113-600-2007	Operate Telephone Set TA-312/PT
	551-721-1360	Drive a Cargo Vehicle on Side Roads or Unimproved Roads
STP 3-54B2-SM	031-508-2011	Conduct Tactical Movement Into Smoke Positions
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5505	Issue an Oral Operations Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	071-326-5610	Conduct Movement Techniques by a Squad
	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-508-2011	Conduct Tactical Movement Into Smoke Positions
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation

References	Task Number	Task Title
	071-326-5502	Issue a Fragmentary Order
	071-326-5505	Issue an Oral Operations Order
	071-326-5610	Conduct Movement Techniques by a Squad
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	071-410-0019	Control Organic Fires
	113-600-2007	Operate Telephone Set TA-312/PT
	551-721-1360	Drive a Cargo Vehicle on Side Roads or Unimproved Roads

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources.

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC) equipment; communication equipment; and ammunition.

b. Maps and overlays.

2. Training Site. The training site should provide the following:

a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.

b. Enough natural vegetation and terrain relief to allow the squad/platoon to select a route that makes use of available cover and concealment.

3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The mission's objective is to choose the proper movement technique. The squad/platoon's situational awareness and battle tracking skills are critical in choosing the right movement technique.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part of the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The traveling movement technique is employed when enemy contact is not likely.
 - a. Vehicles move in column formation at 50-meter intervals (based on mission, enemy, terrain, troops, time available, and civilian consideration [METT-TC]).
 - b. Vehicles move continuously at a maximum safe speed.
 - c. Vehicles use the herringbone formation when the column

stops.

d. Vehicles move along covered and concealed routes.

e. The vehicle column contracts and expands automatically based on the terrain and visibility.

f. Designated personnel for each vehicle maintain local security.

(1) Designate air guards for each vehicle.

(2) Designate primary areas of responsibility for each vehicle.

g. The unit performs the required actions during a halt.

(1) Designated personnel dismount and establish an observation post (OP).

(2) The driver and surveyor dismount and establish security.

(3) The team leader/vehicle commander remains with the vehicle and mans the M240 machine gun and monitors communications.

2. The traveling-overwatch movement technique is employed when enemy contact is likely.

a. The unit moves in column formation at 50-meter intervals (based on METT-TC).

b. The lead vehicle moves continuously, following covered and concealed routes, and is about 50 meters ahead of the other vehicles, depending on the terrain and the vegetation.

c. Trail vehicles move at varying speeds, stopping as required to overwatch the lead vehicle, maintaining visual contact with the lead vehicle at all times.

d. In wooded areas or restricted terrain, the unit reduces speed and intervals.

e. In adverse weather conditions, the lead team dismounts to verify the trafficability of the route, while the trail vehicles provide overwatch for the lead vehicle.

- f. Designated personnel maintain local security.
 - (1) Designate air guards for each vehicle.
 - (2) Designate primary areas of responsibility for each vehicle.
- g. The unit performs the required actions during a halt.
 - (1) Designated personnel dismount and establish an OP.
 - (2) The driver and surveyor dismount and establish security.
 - (3) The team leader/vehicle commander remains with the vehicle and mans the M240 machine gun and monitors communications.

3. The bounding-overwatch movement technique is employed when enemy contact is expected.

- a. The basic movement formation is the staggered column with a 50- to 100-meter interval between vehicles (based on METT-TC).
- b. The lead team bounds forward following a covered and concealed route.

NOTE: The bounding element may be a single team for a squad movement.

- c. Overwatch teams provide protection using covered and concealed positions for the bounding element, maintaining visual contact with each element at all times.
- d. The length of the bound is based on the terrain analysis and the ranges and fields of fire from the overwatch vehicles.
- e. Designated personnel maintain local security.
 - (1) Designate air guards for each vehicle.
 - (2) Designate primary areas of responsibility for each vehicle.
- f. The unit performs the required actions during a halt.
 - (1) Designated personnel dismount and establish an OP.
 - (2) The driver and surveyor dismount and establish

security.

(3) The team leader/vehicle commander remains with the vehicle and mans the M240 machine gun and monitors communications.

COACHING POINT: Every member of the squad/platoon must know what movement technique to use according to the enemy situation. The squad/platoon must gather as much information on the enemy situation as possible. Proper battle tracking and updated graphics/overlays will keep the squad/platoon up to date on the enemy situation.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-219-D60-MTP	03-3-1035	Conduct a Radiological Reconnaissance
	07-3-C211.03-1001	Move Tactically

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-10-MTP	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-30-MTP	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-477-10-MTP	07-3-C211.03-1001	Move Tactically

2-5. Battle Drill 03-3-D0B12.

TASK: Determine Nearside/Farside (03-3-D0B12)

CONDITIONS: A team/squad conducts a nuclear, biological and chemical (NBC) route reconnaissance to determine if the route is contaminated. If contamination is detected by the mobile mass spectrometer (MM1), it then gives off an alarm of potential NBC contamination hazards.

STANDARDS: The NBC reconnaissance element confirms the presence of chemical contamination. The NBC element determines the edge of the contamination, and backs up 200 meters, and posts the appropriate NBC marker. The element then proceeds through the contamination and locates the far side of the contamination; it then moves 200 meters further and posts the appropriate NBC marker. The vehicle commander notifies higher headquarters (HQ) of the contamination.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-24-SMCT	031-503-3008	Implement Mission Oriented Protective Posture (MOPP)
	031-503-3008D	Implement Mission Oriented Protective Posture (MOPP)
	031-503-3010	Supervise Employment of NBC Markers
	031-503-4002	Supervise Unit Preparation for NBC Attack
	071-326-0515	Select a Movement Route Using a Map
	071-331-0820	Analyze Terrain

References	Task Number	Task Title
STP 3-54B1-SM	031-503-1030	Prepare the Chemical Agent Monitor for Operation
	031-503-1031	Use the Chemical Agent Monitor
	031-507-1022	Decontaminate Equipment Using M13 Decontaminating Apparatus, Portable
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)

References	Task Number	Task Title
	071-326-3001	Direct a Driver Over a Terrain Route
STP 3-54B2-SM	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5505	Issue an Oral Operations Order
	071-329-1030	Navigate From one Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	031-506-3001	Plan Decontamination Operations
	031-506-3001D	Plan Decontamination Operations
	071-326-5610	Conduct Movement Techniques by a Squad
	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-503-1030	Prepare the Chemical Agent Monitor for Operation
	031-503-1031	Use the Chemical Agent Monitor
	031-506-3001	Plan Decontamination Operations
	031-506-3001D	Plan Decontamination Operations

References	Task Number	Task Title
	031-507-1022	Decontaminate Equipment Using M13 Decontaminating Apparatus, Portable
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-326-3001	Direct a Driver Over a Terrain Route

References	Task Number	Task Title
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5505	Issue an Oral Operations Order
	071-326-5610	Conduct Movement Techniques by a Squad
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	071-410-0019	Control Organic Fires

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training Site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

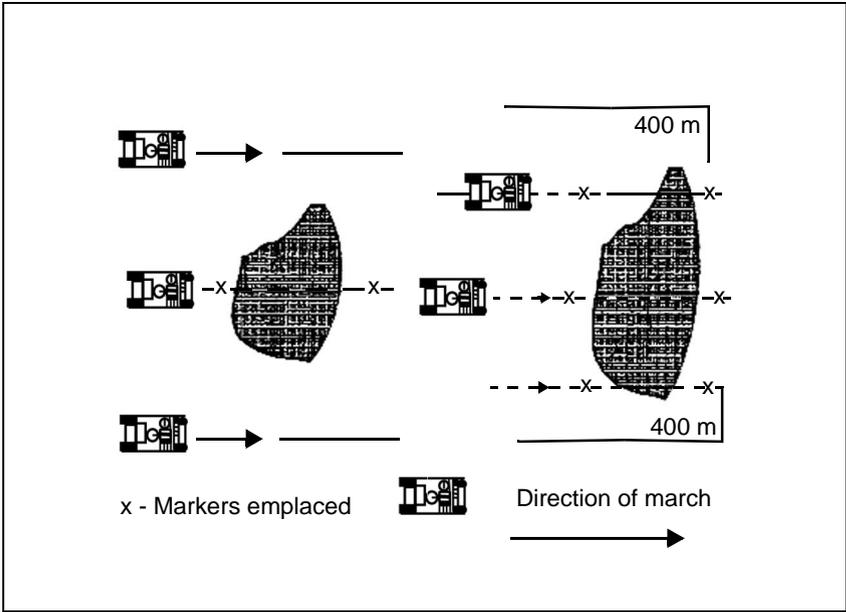
1. Orientation. The mission objective of this battle drill is to rapidly locate the area of contamination. Using the nearside/far-side technique, identify and properly mark the area of contamination.

2. Safety/Fratricide.
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of the drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The leader sends an NBC 4 report to higher HQ once contamination is detected.
2. The leader uses the nearside/far-side method to conduct the route reconnaissance. See *Figure 03-3-DOB12-1*.
3. The vehicle that detected the contamination, stops and identifies and verifies the agent using the MMI.
4. Other vehicles provide area security and mark the nearside of the contamination 200 meters from the edge of contamination or the nearest intersection.
5. The vehicle that detected the contamination continues route reconnaissance using the air/high setting to determine the far side of the contamination.



**Figure 03-3-D0B12-1
Nearside/Farside Reconnaissance Method**

6. Once the far side is determined, the area is marked 200 meters from the edge of contamination or the nearest intersection.
7. Once the far side of the contamination is marked, the leader requests further mission instructions and decontamination support.

NOTE: The multipurpose, integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

COACHING POINT: The objective of this pattern is to quickly establish the depth of the contamination. The key to this drill is repetition. Each team must know what the other is doing on the survey. The squad/platoon's standing operating procedure (SOP) may include communication procedures used during the reconnaissance.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice

this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-117-40-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-117-D40-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C225	Conduct Chemical Reconnaissance
	03-3-C226	Cross a Chemically Contaminated Area
	03-3-1035	Conduct a Radiological Reconnaissance
ARTEP 3-219-D60-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-457-10-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C225	Conduct Chemical Reconnaissance
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-457-30-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-477-10-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area

2-6. Battle Drill 03-3-D0B13.

TASK: Determine a Bypass Route (03-3-D0B13)

CONDITIONS (CUE): The reconnaissance unit is supporting combat operations under nuclear, biological and chemical (NBC) conditions. The reconnaissance unit is tasked to conduct a route reconnaissance to determine if the route is contaminated. If the route is contaminated, the reconnaissance unit is tasked to find a suitable bypass route around the contaminated area. The unit receives the order to conduct a route reconnaissance and find a bypass if the primary route is contaminated.

STANDARDS: The reconnaissance leader conducts initial planning. The reconnaissance leader supervises the unit's preparation for the reconnaissance mission. The unit conducts a map reconnaissance of the route and establishes initial/subsequent mission-oriented protection posture (MOPP) levels. The unit identifies the start and release point for the reconnaissance mission. The unit conducts the reconnaissance mission and reports the results back to headquarters (HQ).

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-503-3010	Supervise Employment of NBC Markers
	071-326-0515	Select a Movement Route Using a Map
	071-331-0820	Analyze Terrain
	031-503-1030	Prepare the Chemical Agent Monitor for Operation
STP 3-54B1-SM	031-503-1031	Use the Chemical Agent Monitor

References	Task Number	Task Title
	031-507-1022	Decontaminate Equipment Using M13 Decontaminating Apparatus, Portable
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-5502	Issue a Fragmentary Order
STP 3-54B2-SM	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-326-3049	Conduct Troop-Leading Procedures for an Operation

References	Task Number	Task Title
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-503-1030	Prepare the Chemical Agent Monitor for Operation
	031-503-1031	Use the Chemical Agent Monitor
	031-507-1022	Decontaminate Equipment Using M13 Decontaminating Apparatus, Portable
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks

References	Task Number	Task Title
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5502	Issue a Fragmentary Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	071-410-0019	Control Organic Fires

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad/platoon to select a route that makes use of available cover and concealment.

3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this battle drill is to rapidly locate a bypass route around the area of contamination. Using the bypass route will avoid the loss of maneuver force momentum or provide an uncontaminated route.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The reconnaissance unit moves along a designated route, checking for contamination.
2. Once contamination is detected, the unit leader:
 - a. Stops and identifies and verifies the agent.
 - b. Marks the route 200 meters to the rear of contamination.

c. Based on the wind direction, uses one of the following bypass techniques to find a clean route around the contamination area.

(1) Determines an alternate route to the objective, before where contamination was detected, based on terrain. See *Figure 03-3-DOB13-1*.

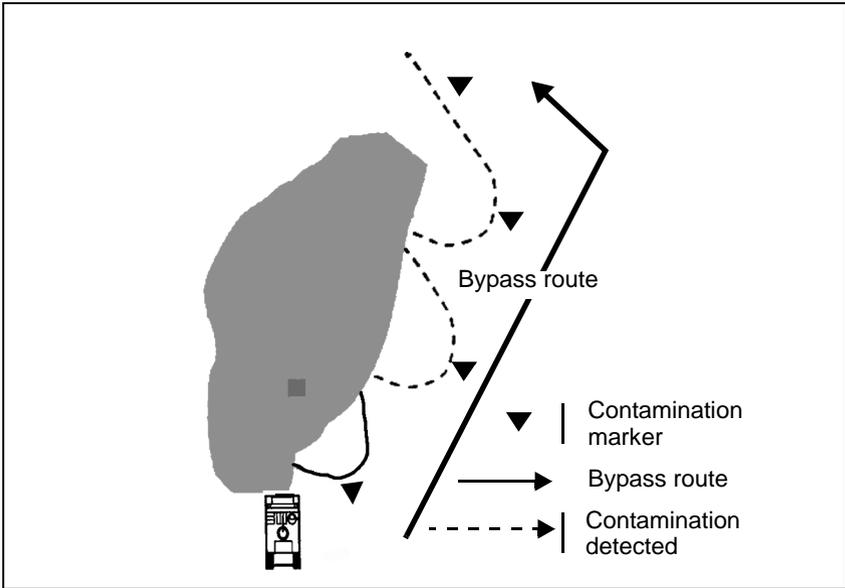


Figure 03-3-D0B13-1
Bypass Route

- (a) Marks the intersection of the contaminated route and the bypass route.
- (b) Ensures that an NBC 4 report is received by higher HQ.
- (c) Monitors for contamination along the bypass route.
- (d) Marks all intersections leading back into the contamination.

(e) Ensures that an NBC 4 report is received by higher HQ each time an intersection is marked.

(f) Marks the intersection where the bypass route and the contaminated route meet.

(g) Continues to monitor along the route until the objective is reached.

(2) Bypasses around the contamination area once contamination is encountered.

(a) Backs up 200 meters. If clean, drops a marker and moves left or right (based on wind direction or prior guidance).

(b) Moves back into the contamination and repeats the process until the contamination is bypassed.

(3) When the bypass is determined and marked, the leader requests further mission instructions and decontamination support.

NOTE: The multipurpose, integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQs.

COACHING POINT: The objective of this drill is to quickly find a bypass route around the contamination. The key to this drill is repetition. Every member of the reconnaissance team must know his part in the drill. It must be done rapidly so the maneuver force can continue their mission.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-3-1047	Determine a Bypass

2-7. Battle Drill 03-3-D0B14.**TASK:** Mark Limits (Boundaries) of Contamination (03-3-D0B14)**CONDITIONS (CUE):** The reconnaissance unit is supporting combat operations under nuclear, biological, and chemical (NBC) conditions. The reconnaissance unit is tasked to conduct an area reconnaissance to determine if the area is contaminated. If the area is contaminated, the reconnaissance unit is tasked to mark the limits of the contaminated area. The reconnaissance unit receives an order to conduct an area reconnaissance and mark the contaminated area.**STANDARDS:** The reconnaissance leader conducts initial planning. He supervises the unit's preparation for the reconnaissance mission. Conducts a map reconnaissance of the area and establishes initial and subsequent mission-oriented protection posture (MOPP) levels. The leader identifies the start and release point for the reconnaissance mission. The unit conducts the reconnaissance mission, marks the limits of contamination, and reports the results to headquarters (HQ).**SUPPORTING INDIVIDUAL TASKS:** See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-506-1053	Report NBC Information Using NBC 4 Report
	071-326-0515	Select a Movement Route Using a Map
	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)

References	Task Number	Task Title
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1013	Perform PMCS on the M93 NBCRS (FOX)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	071-311-2130(O)	Engage Targets With an M203 Grenade Launcher
	071-326-3001	Direct a Driver Over a Terrain Route
	113-610-2044	Navigate Using the AN/PSN-11
STP 3-54B2-SM	031-506-2059	Supervise Performance of Organizational Maintenance and Troubleshooting of M8A1 Alarm System
	031-507-2039	Conduct NBC Reconnaissance
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25

References	Task Number	Task Title
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-506-2059	Supervise Performance of Organizational Maintenance and Troubleshooting of M8A1 Alarm System
	031-507-2039	Conduct NBC Reconnaissance
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1013	Perform PMCS on the M93 NBCRS (FOX)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)

References	Task Number	Task Title
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-311-2130(O)	Engage Targets with an M203 Grenade Launcher
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	071-410-0019	Control Organic Fires
	113-610-2044	Navigate Using the AN/PSN-11

ILLUSTRATIONS: N/A**SETUP INSTRUCTIONS:**

1. Resources:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this battle drill is to rapidly detect, identify, and mark the contaminated area.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of the drill tasks. Time standards are disregarded for the instruction.

TASK STEPS AND PERFORMANCE MEASURES:

1. The reconnaissance unit moves to the contaminated area using a covered and concealed route and the correct movement technique.
2. Once contamination is detected, the reconnaissance leader sends an NBC 4 report to higher HQ.
3. The vehicle that detected the contamination stops and identifies and verifies the agent using the mobile mass spectrometer.
4. Other vehicles provide area security and mark the nearside of the contamination 200 meters from the edge.
5. The vehicle that detected the contamination continues forward

using the air/high setting to determine the far side of the contamination.

6. Other vehicles use the box method at 100-200 meters to find and mark the edge of the contamination.
7. All vehicles reassemble at the far side of the contamination.
8. The leader submits an NBC 4 report to higher HQ.
9. The leader requests further mission instructions and decontamination support.

NOTE: The multipurpose, integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

COACHING POINT: Every member of the squad/platoon must know his part in this battle drill. The area of contamination must be properly marked to avoid friendly forces entering the area. The platoon leadership should follow the basic troop-leading procedures to execute this drill. Once the drill is completed, conduct a thorough after-action review (AAR) to identify any areas that need improvement.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-117-40-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-117-D40-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C225	Conduct Chemical Reconnaissance
	03-3-C226	Cross a Chemically Contaminated Area
	03-3-1035	Conduct a Radiological Reconnaissance
ARTEP 3-219-D60-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
	03-3-C208	Cross a Radiologically Contaminated Area
ARTEP 3-457-10-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C225	Conduct Chemical Reconnaissance

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-457-30-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area
ARTEP 3-477-10-MTP	03-3-C208	Cross a Radiologically Contaminated Area
	03-3-C226	Cross a Chemically Contaminated Area

2-8. Battle Drill 03-3-D0B15.**TASK:** Execute the Star Pattern (03-3-D0B15)**CONDITIONS (CUE):** The unit arrives at the suspected area of contamination. The time is critical, and the commander needs to know if the area is clear of contamination in order to move the main body to its new location. The unit arrives at the start point, and the vehicle commander gives the order to execute the star pattern.**STANDARDS:** The vehicle commanders verify all boundaries (north, south, east, and west) for the suspected area of contamination according to the operation order (OPORD) instruction. The drivers move the vehicles in the direction of each boundary, monitoring and checking each leg for contamination until the star pattern is completed and the results are reported to headquarters (HQ).**SUPPORTING INDIVIDUAL TASKS:** See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-506-1053	Report NBC Information Using NBC 4 Report
	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1017	Perform PMCS on the Double Wheel Sampler Unit
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)

References	Task Number	Task Title
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-5502	Issue a Fragmentary Order
	171-121-3009	Control Techniques of Movement
STP 3-54B2-SM	031-506-2019	Supervise Preparation of Vehicles, Equipment, and Personnel for NBC Reconnaissance
	031-507-2039	Conduct NBC Reconnaissance
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	031-506-2062	Plan NBC Sampling Operations
STP 3-CST (ST)	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-506-2019	Supervise Preparation of Vehicles, Equipment, and Personnel for NBC Reconnaissance
	031-506-2062	Plan NBC Sampling Operations
	031-507-2039	Conduct NBC Reconnaissance

References	Task Number	Task Title
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1017	Perform PMCS on the Double Wheel Sampler Unit
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5502	Issue a Fragmentary Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	171-121-3009	Control Techniques of Movement

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resource:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site should provide the following:

- a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain to allow the squad to select a route that makes use of available cover and concealment.
3. Unit instructions. None.

TALK-THROUGH INSTRUCTIONS:

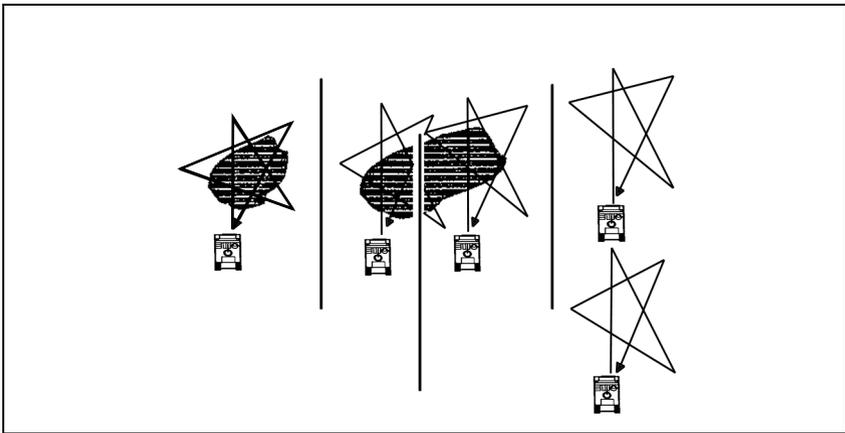
1. Orientation. The objective of this battle drill is to rapidly find the size of the contamination. Use the star pattern technique when the commander wants to know roughly the size of the contaminated area.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation:
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.
2. Initiating cue. The drill begins when the platoon leaders gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The vehicle commander moves the unit to the start point using covered and concealed routes and appropriate movement techniques.
2. The reconnaissance crews ensure that all nuclear, biological, and chemical (NBC) detection equipment is operational and ready to monitor and check for contamination hazards within the designated area.
3. The vehicle commander verifies each boundary (north, south, east, and west) for the specific area of interest according to the OPORD.
4. Each driver moves their vehicle towards the first boundary, using the NBC detection equipment to monitor and check for contamination along the first leg of the star pattern. See *Figure 03-3-DOB15-1*.



**Figure 03-3-D0B15-1
NBC Detection Equipment Checking for Contamination**

a. If contamination is not found, the driver continues along the first leg until he reaches the end of the first boundary and drops a contamination marker and reports results to HQ.

b. If contamination is found, the driver continues to travel in 200-meter increments, along the first leg, beyond each point of detection of contamination, until he reaches the clean side along the first leg of the star pattern and drops a contamination marker.

c. At the end of the first leg of the star, the driver turns the vehicle around and moves in the general direction of the second boundary, using NBC detection equipment to monitor and check for contamination along the second leg of the star pattern.

d. At the end of the second leg of the star, the driver turns the vehicle around and moves in the general direction of the third boundary using NBC detection equipment to monitor and check for contamination along the third leg of the star pattern and reports results to HQ.

e. At the end of the third leg of the star, the driver turns the vehicle around and moves in the general direction of the fourth leg of the star using NBC detection equipment to monitor and check for contamination along the fourth leg of the star pattern and reports results to HQ.

NOTE: For each leg and boundary of the star pattern, the driver repeats steps 4a, b, and c above, and reports the results to HQ for each leg and boundary until the star pattern is completed.

5. At the end of the mission, the reconnaissance unit submits an NBC 4 report to HQ and requests new instructions and decontamination support or follows the instructions according to the current OPOD.

COACHING POINT: A small area of contamination is suspected. One reconnaissance team moves forward, using the star pattern to detect and verify the presence of contamination. If the area is large enough, two vehicles should be used to check the area. Every member of the squad/platoon must know their part of this drill. The platoon leadership should follow the basic troop-leading procedures to execute this battle drill. Once the battle drill is completed, conduct a thorough after-action review (AAR) to identify any areas that need improvement.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice

this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-C225	Conduct Chemical Reconnaissance
ARTEP 3-219-D60-MTP	03-3-1035	Conduct a Radiological Reconnaissance
ARTEP 3-457-10-MTP	03-3-C225	Conduct Chemical Reconnaissance

2-9. Battle Drill 03-3-D0B16.

TASK: Execute the Box Pattern (03-3-D0B16)

CONDITIONS (CUE): The unit arrives at the suspected area of contamination. Time is available for detailed reconnaissance and survey operations. The commander needs to know if the area is clear of contamination. The unit arrives at the start point and the vehicle commander gives the order to execute the box pattern.

STANDARDS: The vehicle commander moves the unit to the start point of the designated area using covered and concealed routes and appropriate movement techniques. The reconnaissance unit departs in the appropriate mission-oriented protection posture (MOPP) level and assumes MOPP4 before starting the reconnaissance/survey mission. The vehicle commander determines and verifies the azimuth and distance for each boundary (north, south, east and west) for the designated area of interest. The drivers move the vehicles in the general direction of each boundary until the box pattern is completed and report results to headquarters (HQ).

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-506-1053	Report NBC Information Using NBC 4 Report
	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
STP 3-54B1-SM	031-507-1021	Mark NBC Contaminated Area
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)

References	Task Number	Task Title
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	071-326-5502	Issue a Fragmentary Order
	171-121-3009	Control Techniques of Movement
STP 3-54B2-SM	031-506-2019	Supervise Preparation of Vehicles, Equipment, and Personnel for NBC Reconnaissance
	031-507-2039	Conduct NBC Reconnaissance
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	031-506-2062	Plan NBC Sampling Operations
STP 3-CST (ST)	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-506-2019	Supervise Preparation of Vehicles, Equipment, and Personnel for NBC Reconnaissance

References	Task Number	Task Title
	031-506-2062	Plan NBC Sampling Operations
	031-507-1021	Mark NBC Contaminated Area
	031-507-2039	Conduct NBC Reconnaissance
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5502	Issue a Fragmentary Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	171-121-3009	Control Techniques of Movement

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.

- b. Maps and overlays.
2. Training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.
3. Unit instruction. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this battle drill is to rapidly employ the squad/platoon for a survey using the box pattern. All squad leaders and vehicle commanders must be able to perform this survey technique.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time

standards are disregarded for the instruction.

2. Initiating cue. The drill begins when the platoon leader gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The vehicle commander moves the unit to the start point using covered and concealed routes and appropriate movement techniques.
2. The reconnaissance unit ensures that all nuclear, biological, and chemical (NBC) detection equipment is operational and ready to monitor and check for contamination hazards within the designated area.
3. The vehicle commander verifies each boundary (north, south, east, and west) for the specific area of interest according to the operation order (OPORD). See *Figure 03-3-DOB16-1*.

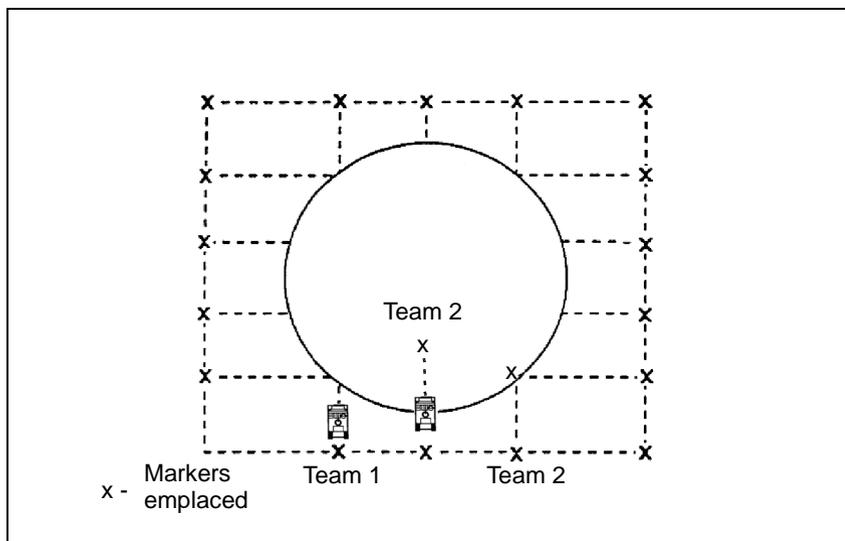


Figure 03-3-D0B16-1
Boundary Verification

4. Team 1 and team 2 travel parallel or in a staggered column in the primary direction of travel for the main body.

a. Team 2 detects contamination and stops. Team 2 informs team 1 to stop at its present location and check for contamination. Team 2 remains at its first position until team 1 checks its present location for contamination and places a contamination marker at its present location.

b. Team 1 receives notification of contamination from team 2. Team 1 stops and checks for contamination at its present location. If the area is clear, team 1 drops a contamination marker and executes a 90-degree left turn. Team 1 moves about 200 meters and executes a 90-degree right turn and continues to monitor and check for contamination.

c. If team 1 detects contamination at its first location, team 1 moves backwards in 50-meter increments or until a clean area is located. Team 2 places a contamination marker at this point, then executes a 90-degree left turn and travels about 200 meters. Team 1 makes a 90-degree right turn in the primary direction of travel and continues to monitor and check for contamination. Team 1 travels approximately 200 meters and executes a 90-degree right turn and continues to check for contamination.

d. If team 1 detects contamination as it moves forward, team 1 moves backwards about 200 meters or until a clean area is located and places a contamination marker. Once again, Team 1 executes a 90-degree left turn and travels about 200-meters and make a 90-degree right turn and continues to monitor and check for contamination.

e. The leader submits an NBC 4 report to HQ on the results of the contaminated area and request decontamination support and new instructions.

NOTE: As team 1 and team 2 move forwards and backwards searching for contamination, both teams continue to execute 90-degree right and left turns and place contamination markers until the box pattern is completed around the contaminated area. The multipurpose integrated chemical agent alarm (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

COACHING POINT: Use the box pattern to conduct a survey when the commander wants to know the limits of contamination (boundaries). The box pattern is time consuming and should mainly be used in rear areas. Every member of the squad/platoon must know their part in this battle drill. The platoon leadership should follow the basic troop-leading procedures to execute this drill. Once the drill is completed, conduct a thorough after-action review (AAR) to identify areas that need improvement.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-1047	Determine a Bypass
	03-3-C225	Conduct Chemical Reconnaissance
ARTEP 3-219-D60-MTP	03-3-1035	Conduct a Radiological Reconnaissance
ARTEP 3-457-10-MTP	03-3-C225	Conduct Chemical Reconnaissance

2-10. Battle Drill 03-3-D0B17.

TASK: Execute the Lane Pattern (03-3-D0B17)

CONDITIONS (CUE): The unit arrives at the suspected area of contamination. Time is available for detailed reconnaissance and survey operations. The commander needs to know if the area is clear of contamination before occupying this location or moving troops enroute to a new location. The leader gives the order to execute the lane pattern.

STANDARDS: The vehicle commander moves the unit to the start point of the designated area using covered and concealed routes and appropriate movement techniques. The reconnaissance unit departs in the appropriate mission-oriented protection posture (MOPP) level and assumes MOPP 4 before starting the reconnaissance-survey mission. The vehicle commander determines and verifies the azimuth and distance for each boundary (north, south, east and west) for the designated area of interest. The driver moves the vehicles up to the line of departure (LD) with a 200-meter interval between each vehicle. The driver moves the vehicles in the general direction from the LD to the line of advance (LOA) until the lane pattern is completed and the results are reported to headquarters (HQ).

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-503-3010	Supervise Employment of NBC Markers
	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	031-503-1030	Prepare the Chemical Agent Monitor for Operation
	031-503-1031	Use the Chemical Agent Monitor
	071-326-5502	Issue a Fragmentary Order

References	Task Number	Task Title
STP 3-54B2-SM	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-CST (ST)	031-503-1030	Prepare the Chemical Agent Monitor for Operation
	031-503-1031	Use the Chemical Agent Monitor
	071-326-5502	Issue a Fragmentary Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this battle drill is to rapidly perform the lane pattern survey technique. The lane pattern is used during route reconnaissance. It can also be used for a nuclear, biological, and chemical (NBC) reconnaissance of long narrow pieces of terrain, such as defiles.

2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.
2. Initiating cue. The drill begins when the platoon leader gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The vehicle commander moves the unit to the start point using covered and concealed routes and the appropriate movement techniques.
2. The reconnaissance unit ensures that all NBC detection equipment is operational and ready to monitor and check for contamination hazards within the designated area.
3. The vehicle commander verifies each boundary (north, south, east, and west) for the specific area of interest according to the OPOD. See *Figures 03-3-DOB17-1* and *03-3-DOB17-2*.
4. Vehicles move up to the LD at 200-meter intervals.

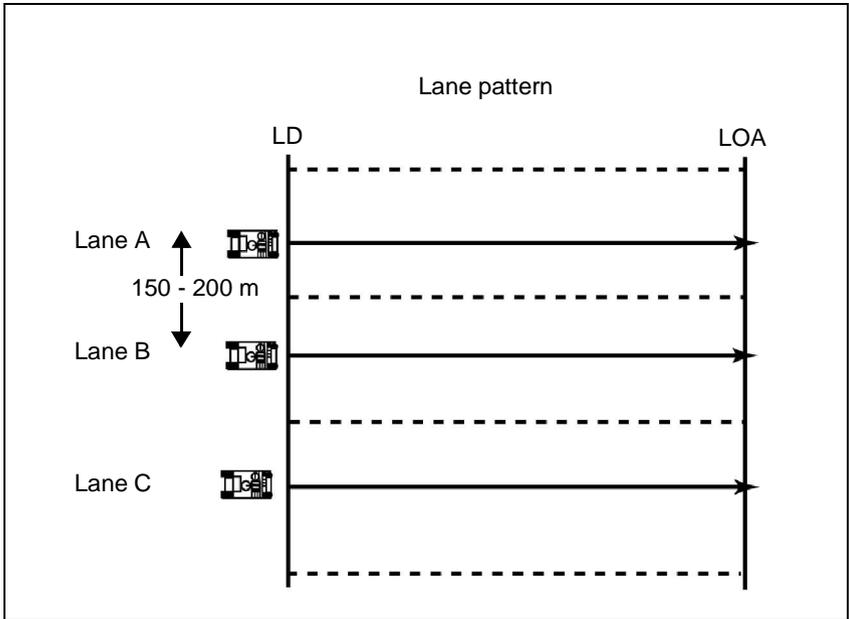


Figure 03-3-D0B17-1
Lane Pattern

- a. Each vehicle moves to a designated lane at the LD.
- b. Each vehicle begins to monitor and check for contamination within its lane from the LD to the LOA.
- c. Each vehicle continues to move within its specific lane until it reaches the LOA.
- d. Each vehicle repeats this process until the mission is completed.
- e. The leader submit NBC 4 report to HQ and request for decontamination support and new instructions and guidance.

NOTE: Multipurpose, integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

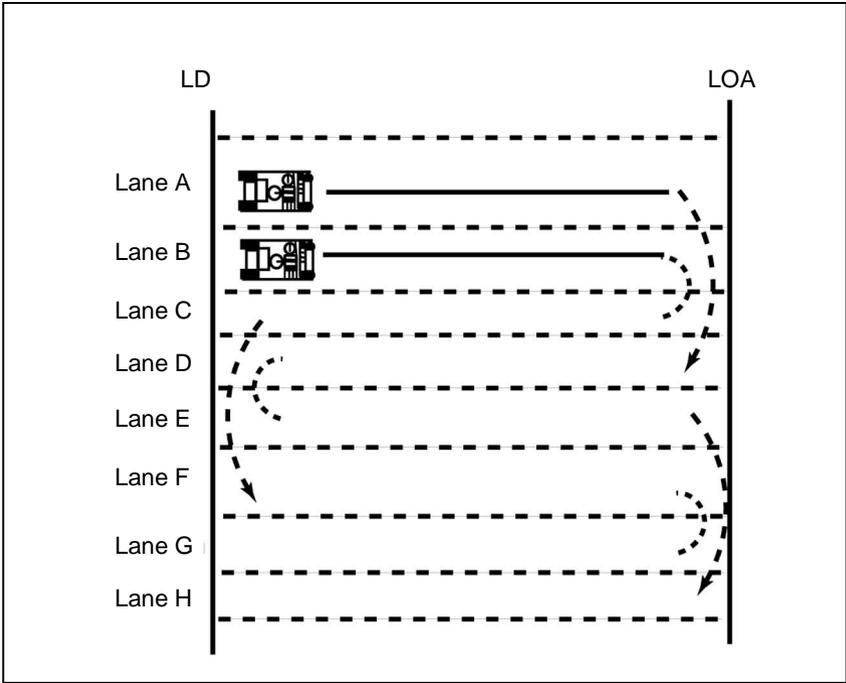


Figure 03-3-D0B17-2
Boundary Verification

COACHING POINT: The lane pattern is similar to the zigzag pattern and is used to locate contaminated areas. The lane pattern is used primarily during route reconnaissance. Platoon leadership must execute proper precombat inspections to prepare for the missions.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldier can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-C225	Conduct Chemical Reconnaissance
ARTEP 3-219-D60-MTP	03-3-1035	Conduct a Radiological Reconnaissance
ARTEP 3-457-10-MTP	03-3-C225	Conduct Chemical Reconnaissance

2-11. Battle Drill 03-3-D0B18.

TASK: Execute the Zigzag Pattern (03-3-D0B18)

CONDITIONS (CUE): The unit arrives at the suspected area of contamination. Time is available for detailed reconnaissance and survey operations. The commander needs to know if the area is clear of contamination before occupying this location or moving troops enroute to a new location. The leader gives the order to execute the zigzag pattern.

STANDARDS: The vehicle commander moves the unit to the start point of the designated area using covered and concealed routes and appropriate movement techniques. The vehicle commander determines and verifies the azimuth and distance for each boundary (north, south, east, and west) for the designated area of interest. The drivers move the vehicles up to the line of departure (LD) with a 200-meter interval between each vehicle. The drivers move the vehicles in the general direction from the LD to the line of advance (LOA) until the zigzag pattern is completed and the results are reported to headquarters (HQ).

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-506-1053	Report NBC Information Using NBC 4 Report
	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)

References	Task Number	Task Title
	031-507-1021	Mark NBC Contaminated Area
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	071-326-5502	Issue a Fragmentary Order
	171-121-3009	Control Techniques of Movement
STP 3-54B2-SM	031-506-2019	Supervise Preparation of Vehicles, Equipment, and Personnel for NBC Reconnaissance
	031-507-2039	Conduct NBC Reconnaissance
	071-326-3049	Conduct Troop-Leading Procedures for an Operation

References	Task Number	Task Title
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	031-506-2062	Plan NBC Sampling Operations
STP 3-CST (ST)	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-506-2019	Supervise Preparation of Vehicles, Equipment, and Personnel for NBC Reconnaissance
	031-506-2062	Plan NBC Sampling Operations
	031-507-1021	Mark NBC Contaminated Area
	031-507-2039	Conduct NBC Reconnaissance
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit

References	Task Number	Task Title
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5502	Issue a Fragmentary Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	171-121-3009	Control Techniques of Movement

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this battle drill is to rapidly conduct the reconnaissance using the zigzag pattern technique. It is mainly used while conducting a zone reconnaissance.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.
2. Initiating cue. The drill begins when the platoon leader gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The vehicle commander moves the unit to the start point using covered and concealed routes and the appropriate movement techniques.
2. The reconnaissance unit ensures that all nuclear, biological, and chemical (NBC) detection equipment is operational and ready to monitor and check for contamination hazards within the designated area.

3. The vehicle commander verifies each boundary (north, south, east, and west) for the specific area of interest according to the operation order (OPORD). See *Figure 03-3-DOB18-1*.

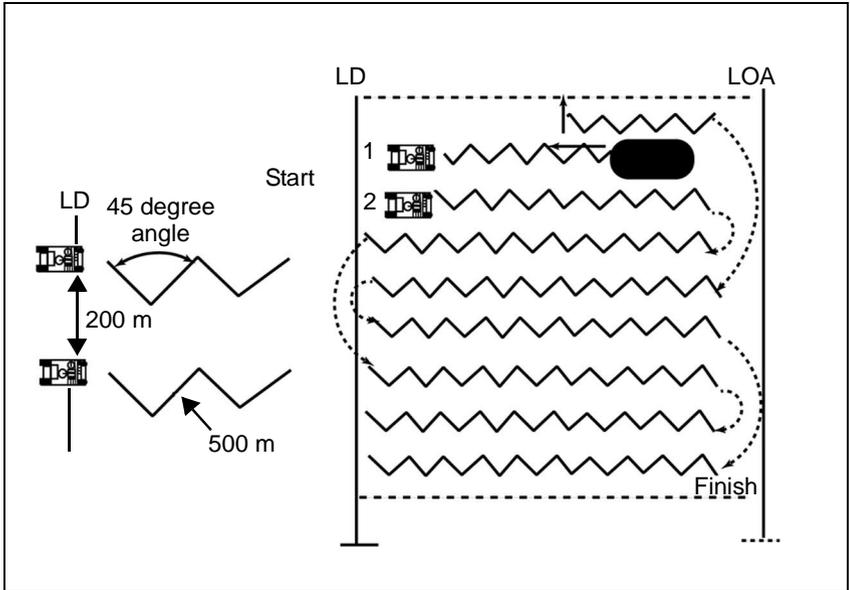


Figure 03-3-D0B18-1
Zigzag Pattern

4. Vehicles move up to the LD at 200-meter intervals.
 - a. Each vehicle moves to a designated lane at the LD.
 - b. Each vehicle begins to move within its lane making 45-degree left and right turns while traveling a distance of about 200 meters for each turn while monitoring and checking for contamination within its lane from the LD to the LOA.
 - c. Each vehicle continues to move within its specific lane until it reaches the LOA.
 - d. Each vehicle repeats this process until the mission is completed.

5. The leader submits NBC 4 report to HQ and requests decontamination support and new instructions and guidance.

NOTE: The multipurpose integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

COACHING POINT: The zigzag pattern may be used with the squad, section, or platoon on line. It would be mainly used while conducting a zone reconnaissance. Every member of the squad/platoon must know their part in the battle drill. The platoon leadership should follow the basic troop-leading procedures to execute this drill. Once the drill is completed, conduct a thorough after-action review (AAR) to identify any areas that need improvement.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-C225	Conduct Chemical Reconnaissance

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-219-D60-MTP	03-3-1035	Conduct a Radiological Reconnaissance
ARTEP 3-457-10-MTP	03-3-C225	Conduct Chemical Reconnaissance

2-12. Battle Drill 03-3-D0C17.**TASK:** Execute an Action Right/Left (03-3-D0C17)**CONDITIONS (CUE):** The squad/platoon is moving from one location to another to support combat operations. Based on the enemy situation during travel, the squad leader gives the appropriate signal (using a radio or arm-and-hand signals) to alert the drivers to change from one formation to another. (The squad/platoon leader gives the order or signal to execute an action right or an action left.)**STANDARDS:** The squad/platoon changes into the designated formation as directed by the squad leader.**SUPPORTING INDIVIDUAL TASKS:** See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-326-0503	Move Over, Through, or Around Obstacles (Except Minefields)
	113-571-1022	Perform Voice Communications
	551-721-1352	Perform Vehicle Preventive Maintenance Checks and Services (PMCS)
STP 21-24-SMCT	071-326-0608	Use Visual Signalling Techniques
	071-326-5630	Conduct Movement Techniques by a Platoon
	071-331-0820	Analyze Terrain
	071-430-0002	Conduct a Defense by a Squad
	441-091-1040	Visually Identify Threat Aircraft
STP 3-54B1-SM	071-326-0608	Use Visual Signalling Techniques
STP 3-54B2-SM	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted

References	Task Number	Task Title
STP 3-54B34-SM-TG	031-508-3073	Employ the M157 Smoke Generator System
	071-326-5610	Conduct Movement Techniques by a Squad
	071-326-5630	Conduct Movement Techniques by a Platoon
	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-508-3073	Employ the M157 Smoke Generator System
	071-326-0608	Use Visual Signalling Techniques
	071-326-5610	Conduct Movement Techniques by Squad
	071-326-5630	Conduct Movement Techniques by a Platoon
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	071-410-0019	Control Organic Fires

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources.

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC)/smoke equipment; communication equipment; and ammunition.

b. Maps with overlays.

2. Training Site. The training site should provide the following:

a. An area large enough for a mounted squad/platoon to move cross-country.

b. Sufficient natural vegetation and relief to permit movement by concealed routes.

3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The mission's objective is to execute an action right or action left as directed. To support this mission or requirement, you must be able to perform this task immediately with very little instruction and guidance.
2. Safety/Fratricide. The unit must observe all safety measures in the appropriate safety directives and the applicable technical manuals (TMs) and field manuals (FMs).
3. Demonstration (optional). If a nearby unit has successfully performed the drill, that unit may be used to demonstrate the performance of this drill. Explain the critical actions that are being performed and why these actions are critical and essential to the performance of this training. Ensure that you use all performance measures during the explanation of why this task is important. After the demonstration, summarize its strengths and weaknesses.
4. Explanation.
 - a. Explain the objective in your own words.
 - b. Explain the duties of all soldiers in the squad/platoon. Ensure that everyone knows his duties and responsibilities pertaining to each portion of the drill.
 - c. Sketch a diagram explaining the actions to be taken by each member of the squad/platoon.
 - d. Ask if there are any questions pertaining to the drill. If so, ensure that all questions are correctly answered before beginning to train the drill.

e. Have each member explain his part in detail before training the drill. Make on-the-spot corrections as necessary.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The squad/platoon leader signals or orders an action right or action left. See *Figures 03-3-DOC17-1, 03-3-DOC17-2, 03-3-DOC17-3, 03-3-DOC17-4, 03-3-DOC17-5, 03-3-DOC17-6, 03-3-DOC17-7, and 03-3-DOC17-8.*
2. The squad/platoon leader indicates the required formation by using standard arm-and-hand, flag, or other signals or by issuing a command over the radio system.
3. Vehicle commanders relay the appropriate signal to each vehicle operator and—
 - a. Direct drivers into position in the new formation.
 - b. Orient the machine guns toward likely enemy positions or assigned sectors of fire.
4. The unit executes the formation as directed and continues its mission.

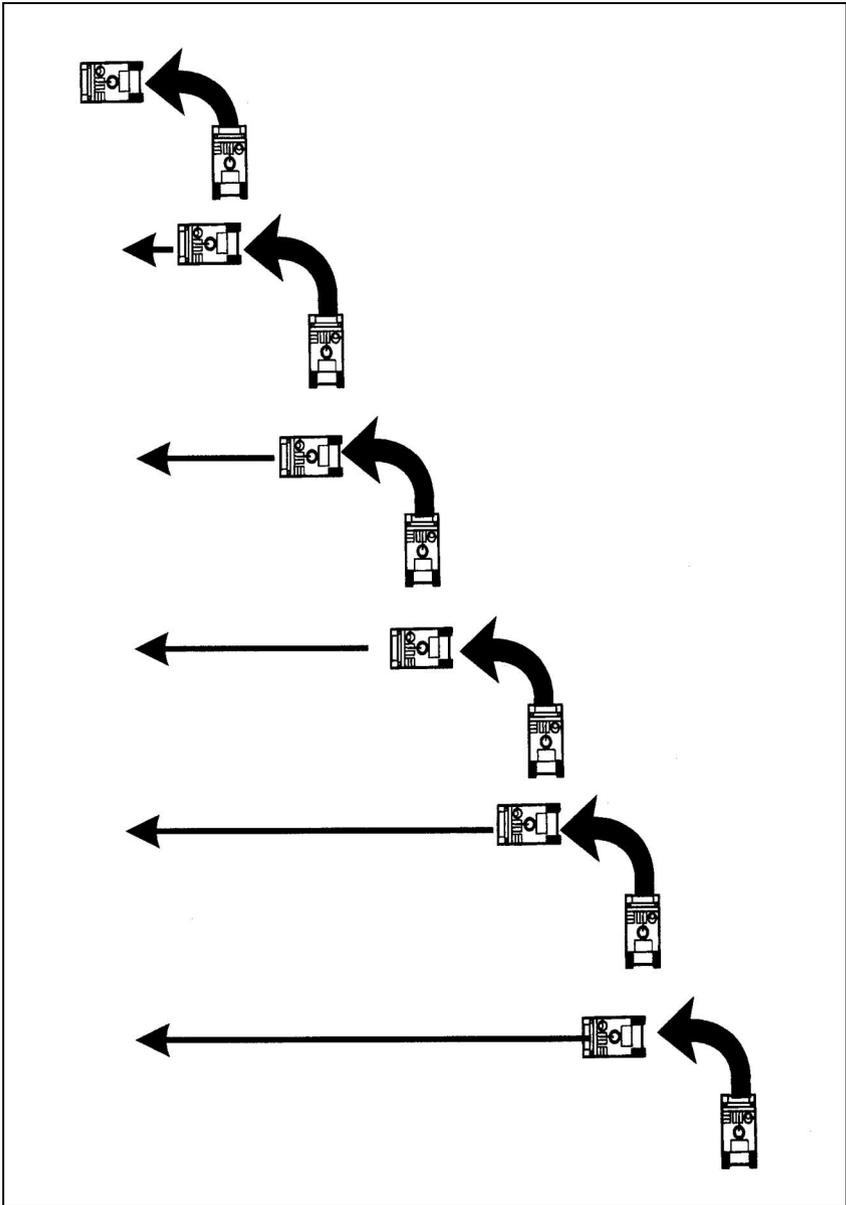


Figure 03-3-D0C17-1
Action Left From an Echelon Right Formation

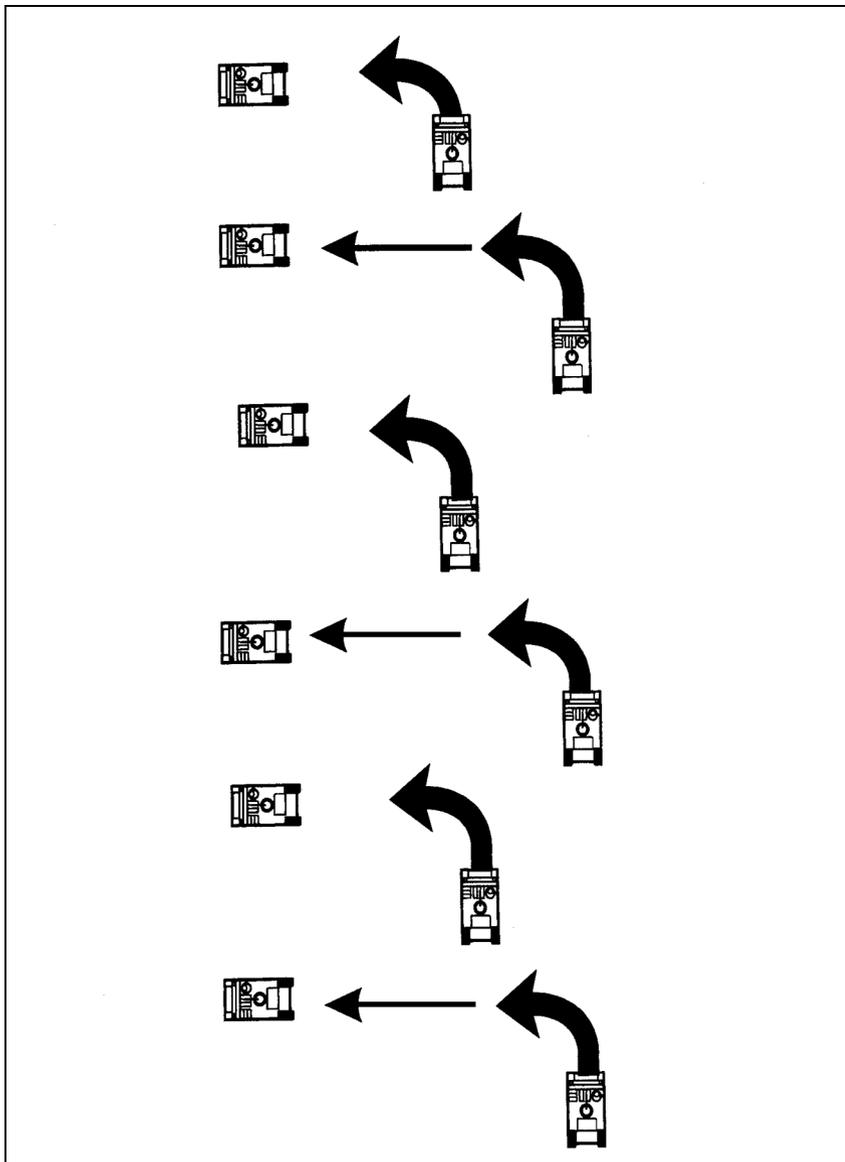


Figure 03-3-D0C17-2
Action Left From a Staggered Column Formation

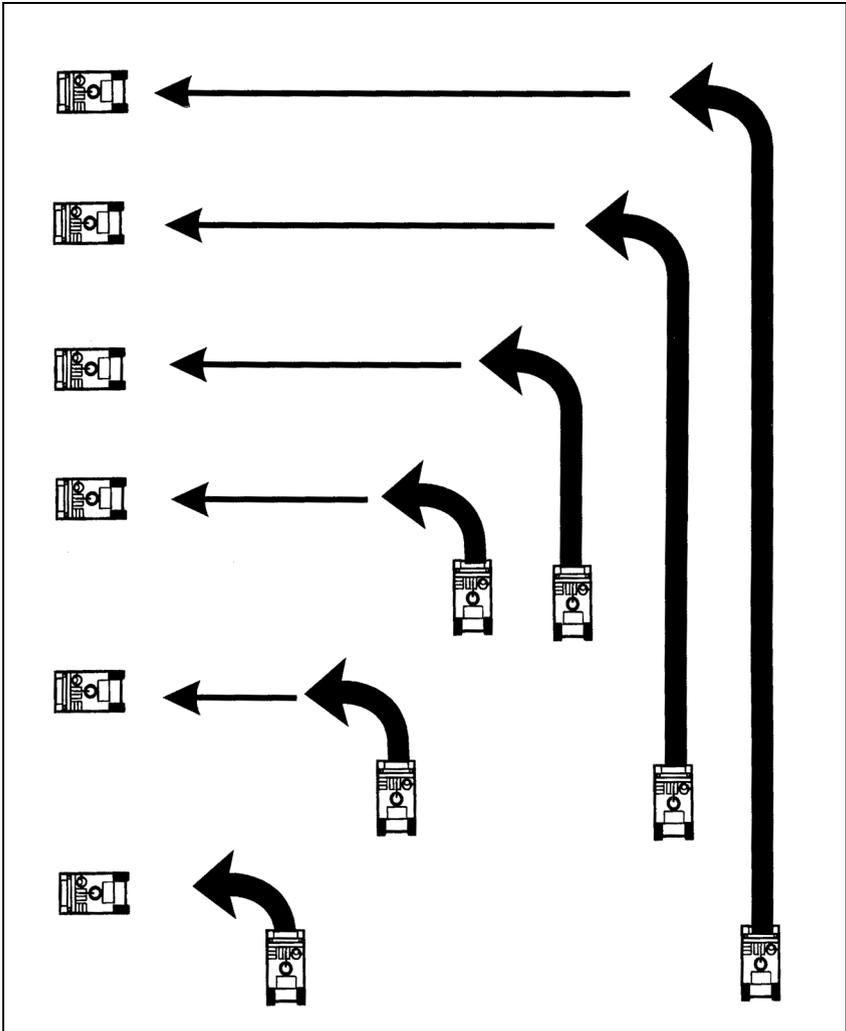


Figure 03-3-D0C17-3
Action Left From a Wedge Formation

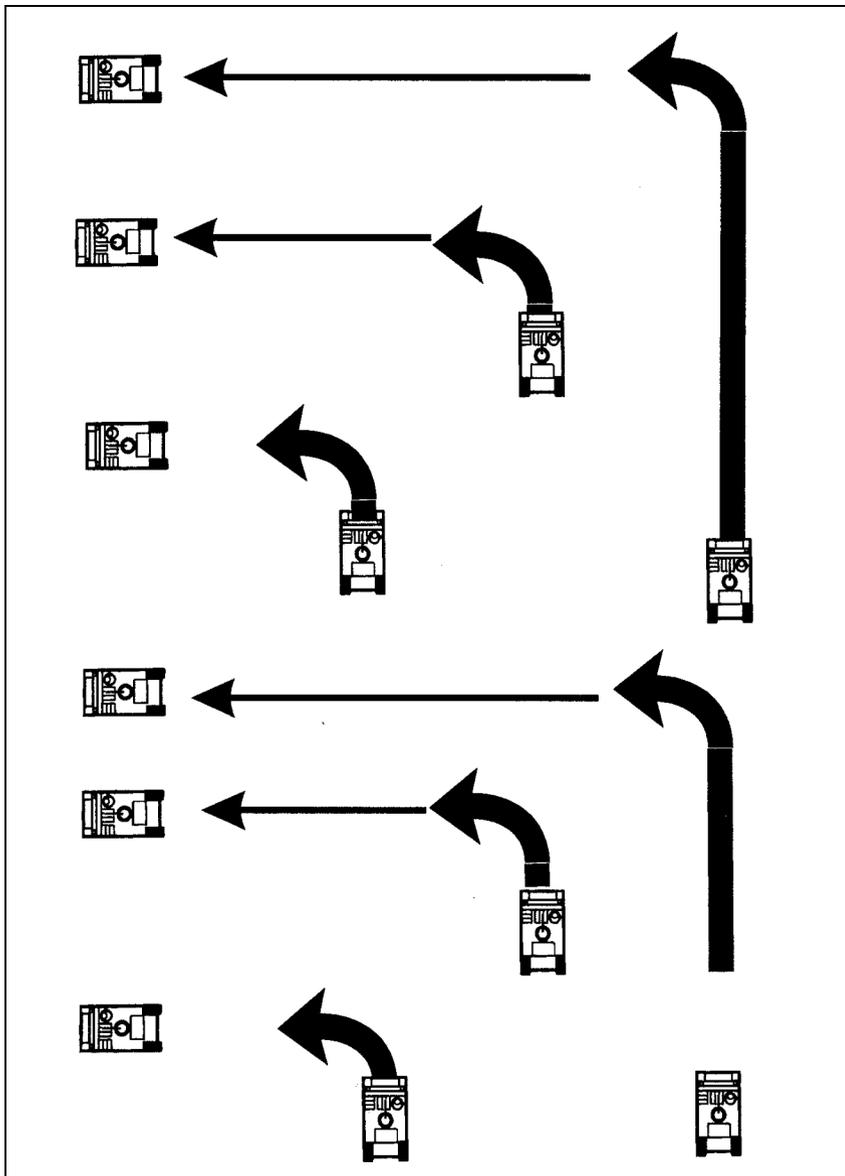


Figure 03-3-D0C17-4
Action Left From a Column Wedge Formation

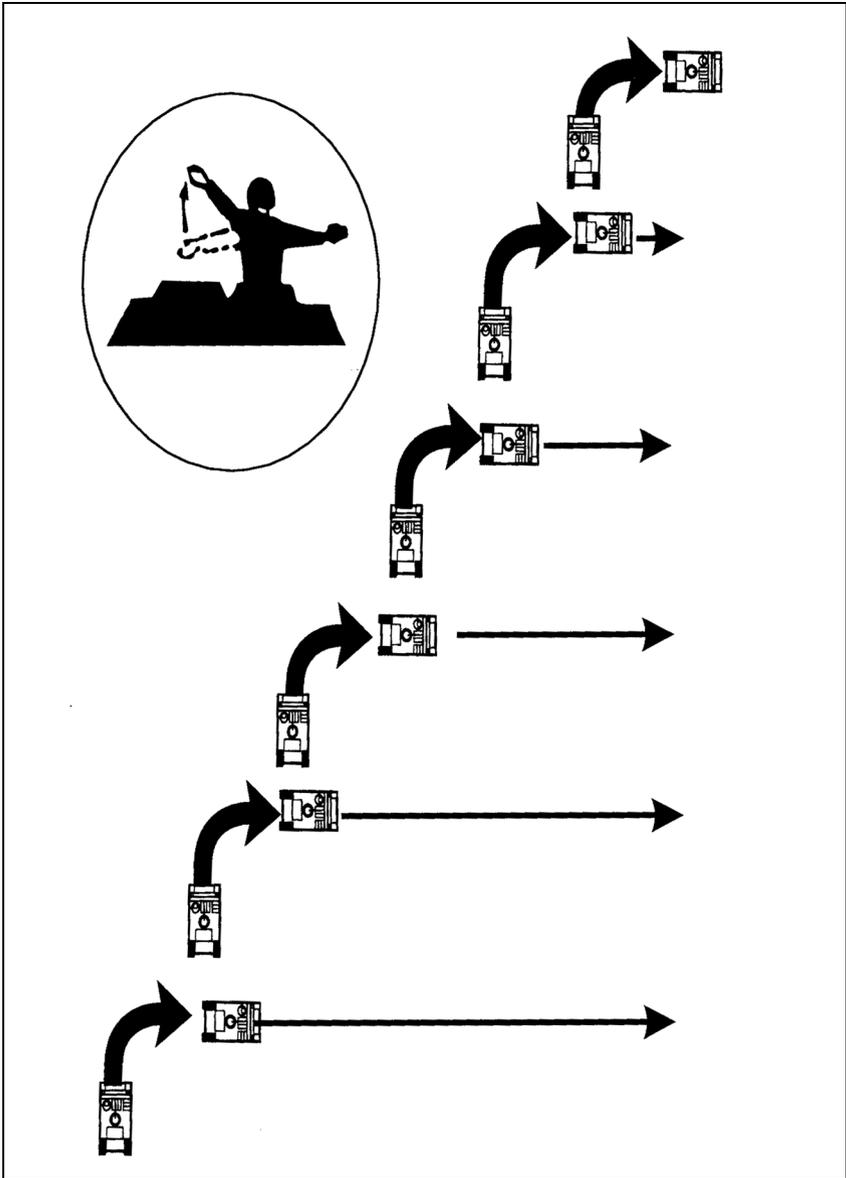


Figure 03-3-D0C17-5
Action Right From an Echelon Left Formation

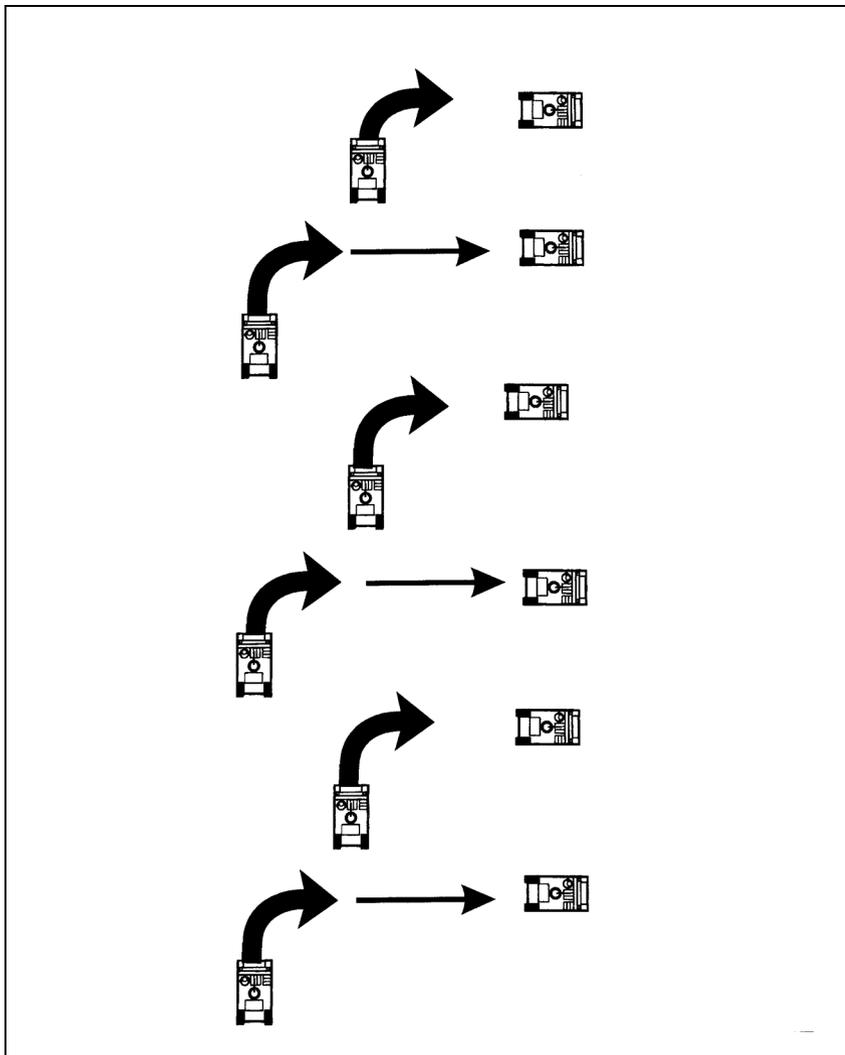


Figure 03-3-D0C17-6
Action Right From a Staggered Column Formation

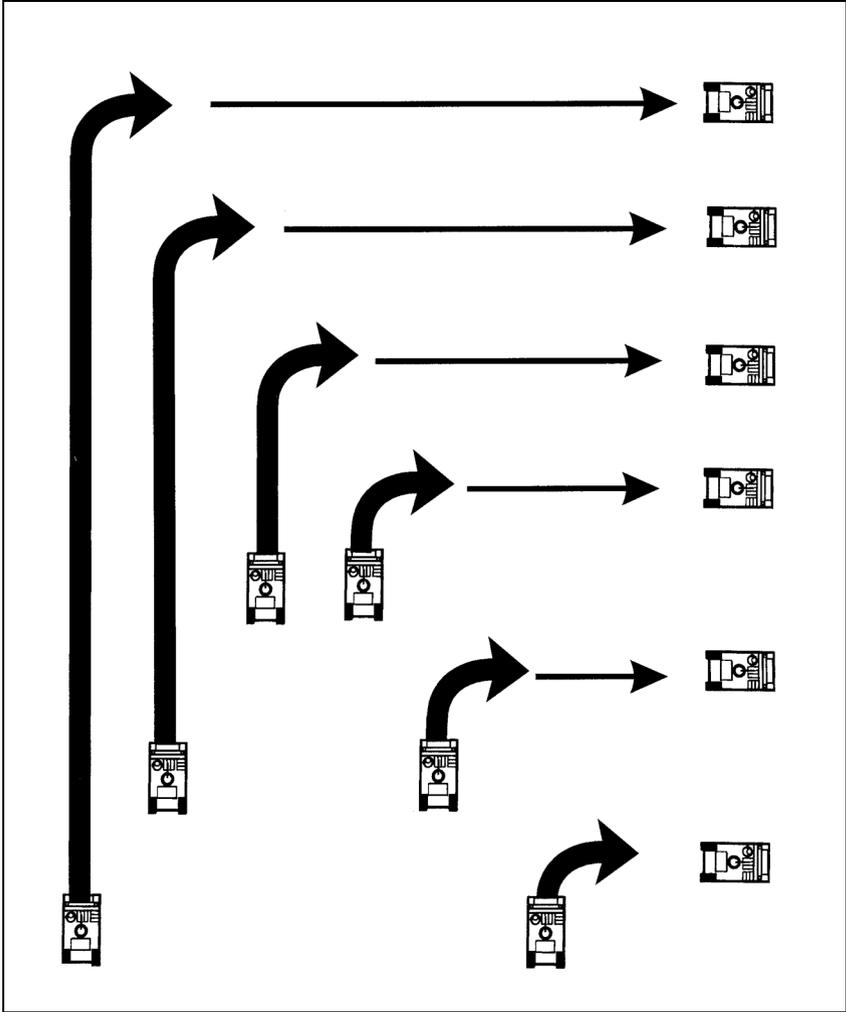


Figure 03-3-D0C17-7
Action Right From a Wedge Formation

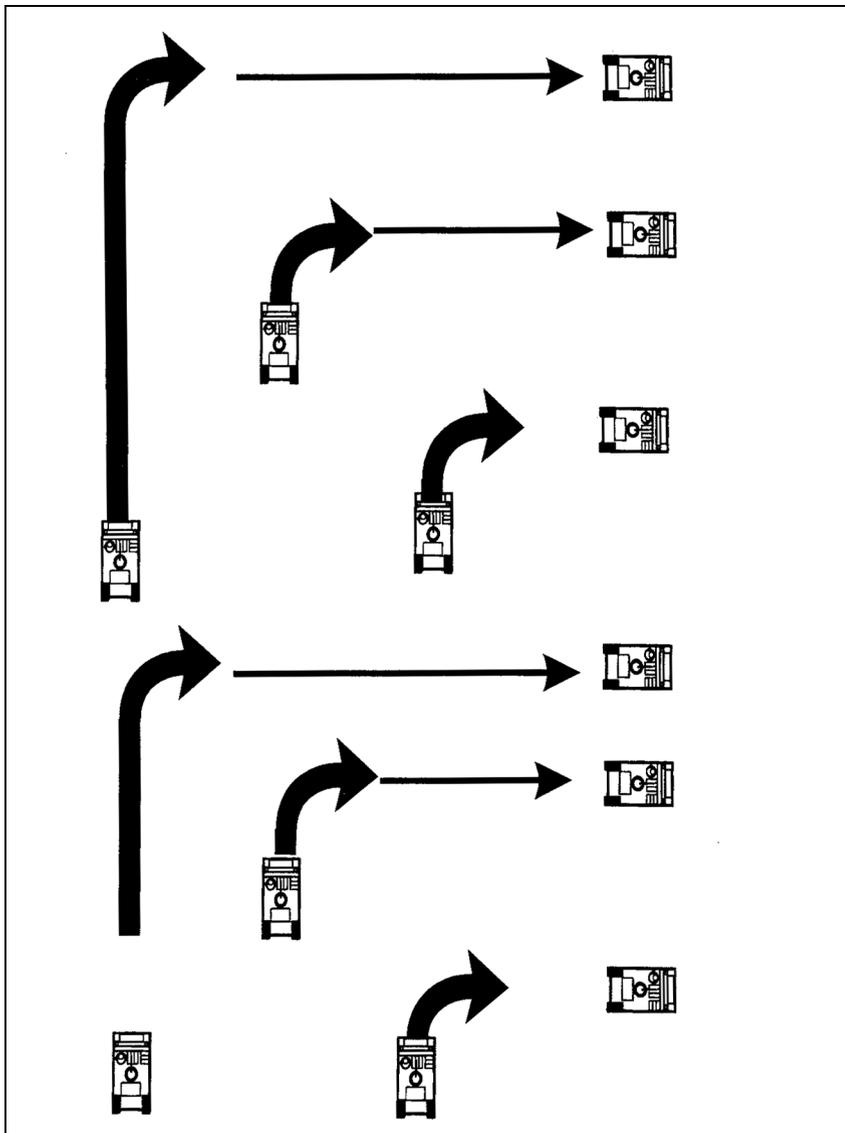


Figure 03-3-D0C17-8
Action Right From a Column Wedge Formation

COACHING POINT:

1. The most common types of visual signals are: arm-and-hand, flag, pyrotechnic, and ground-to-air. However, soldiers are not limited to these types of signals and may use what is available.
2. Chemical light sticks, flashlights, and other items can be used provided their use is standardized within a unit and understood by the soldiers and units working in the area.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-3-1046	React to Contact
	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-219-D60-MTP	03-3-1046	React to Contact
	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-10-MTP	03-3-1046	React to Contact
	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-30-MTP	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-477-10-MTP	07-3-C211.03-1001	Move Tactically

2-13. Battle Drill 03-3-D0C18.

TASK: Secure at Halt (03-3-D0C18)

CONDITIONS (CUE): The squad/platoon is moving from one location to another to conduct reconnaissance operations. The unit must be prepared to defend itself against an ambush or surprise enemy contact during the movement or when halted. (The squad/platoon leader gives the appropriate signal [using arm-and-hand or flag signals or a radio command] to alert the unit to halt.)

STANDARDS: Vehicle commanders move their vehicles to their designated positions in the formation, using available cover and concealment.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-326-0513	Select Temporary Fighting Positions
	071-331-0815	Practice Noise, Light, and Litter Discipline
	113-571-1022	Perform Voice Communications
STP 21-24-SMCT	031-503-3008	Implement Mission Oriented Protective Posture (MOPP)
	071-326-0515	Select a Movement Route Using a Map
	071-326-0608	Use Visual Signalling Techniques
	071-326-5630	Conduct Movement Techniques by a Platoon
	071-326-5705	Establish an Observation Post
STP 3-54B1-SM	071-331-0820	Analyze Terrain
	071-326-0515	Select a Movement Route Using a Map

References	Task Number	Task Title
STP 3-54B2-SM	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	071-326-5610	Conduct Movement Techniques by a Squad
	071-326-5630	Conduct Movement Techniques by a Platoon
	171-123-4000	Plan the Occupation of an Assembly Area
STP 3-CST (ST)	071-326-0515	Select a Movement Route Using a Map
	071-326-5610	Conduct Movement Techniques by a Squad
	071-326-5630	Conduct Movement Techniques by a Platoon
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	171-123-4000	Plan the Occupation of an Assembly Area

ILLUSTRATIONS: N/A**SETUP INSTRUCTIONS:**

1. Resources.
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC)/smoke equipment; communication equipment; and ammunition.
 - b. Maps with overlays.
2. Training Site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move cross-country.
 - b. Sufficient natural vegetation and relief to permit movement

by concealed routes.

3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The mission's objective is to provide security while the unit is in the halt position. To support this mission or requirement, you must be able to perform this task immediately with very little instruction and guidance.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The squad/platoon leader gives the appropriate signal or command to use the herringbone or coil formation while halted. See *Figures 03-3-DOC18-1, 03-3-DOC18-2, 03-3-DOC18-3, and 03-3-DOC18-4.*

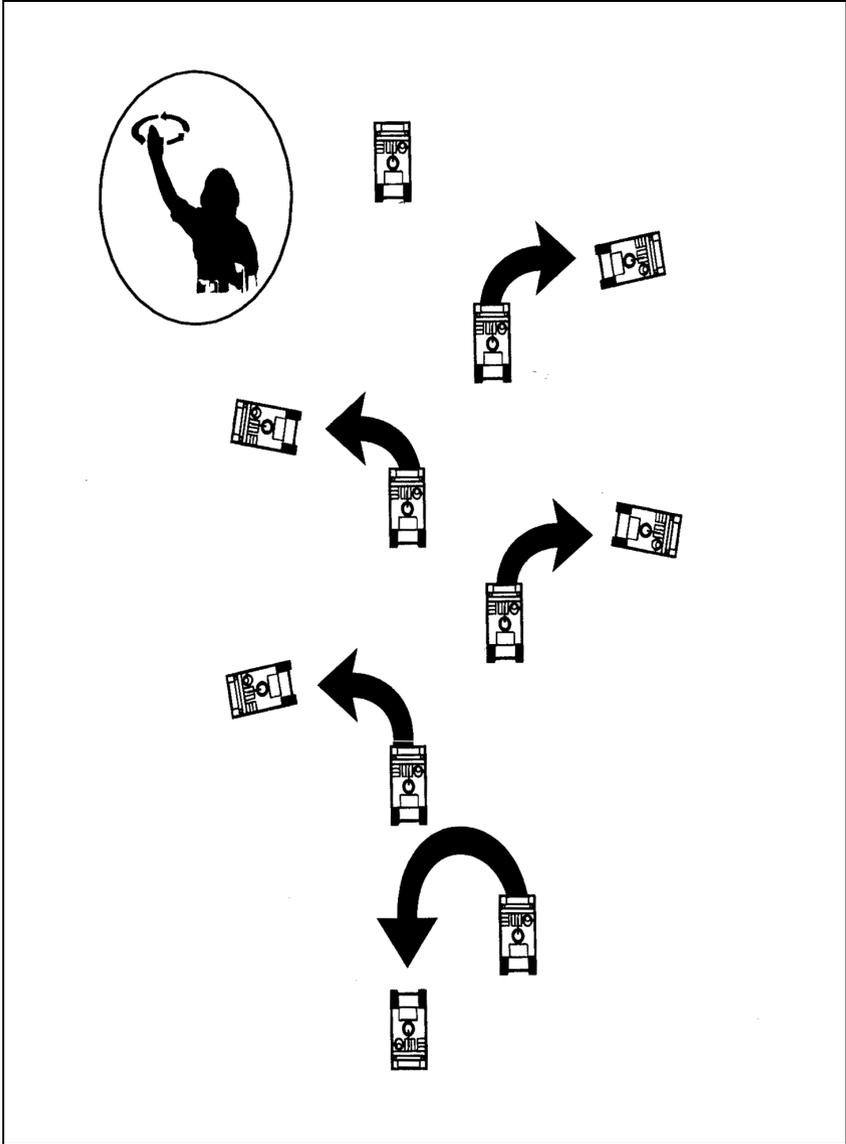


Figure 03-3-D0C18-1
Coil Formation From a Staggered Column Formation

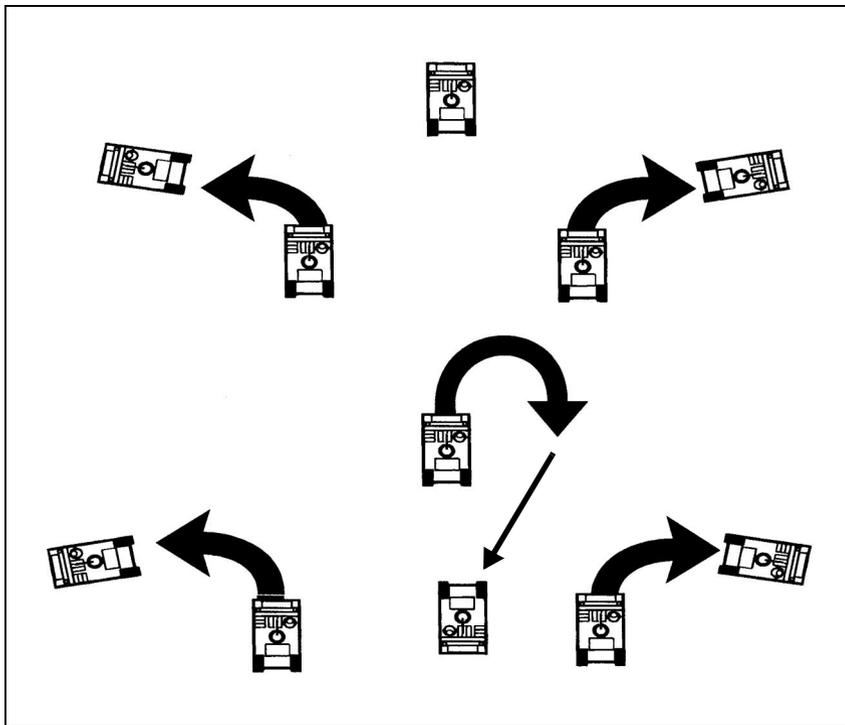


Figure 03-3-D0C18-2
Coil Formation From a Column of Wedges Formation

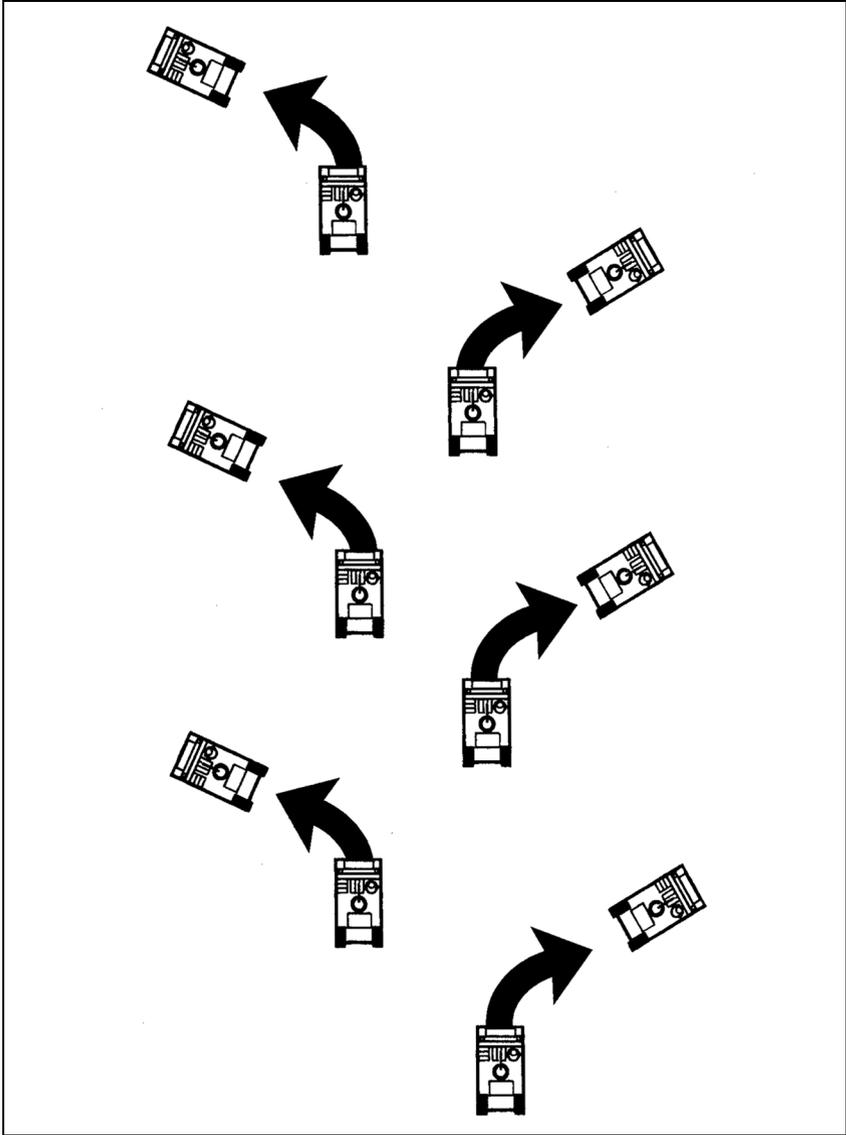


Figure 03-3-D0C18-3
Herringbone Formation From a Staggered Column Formation

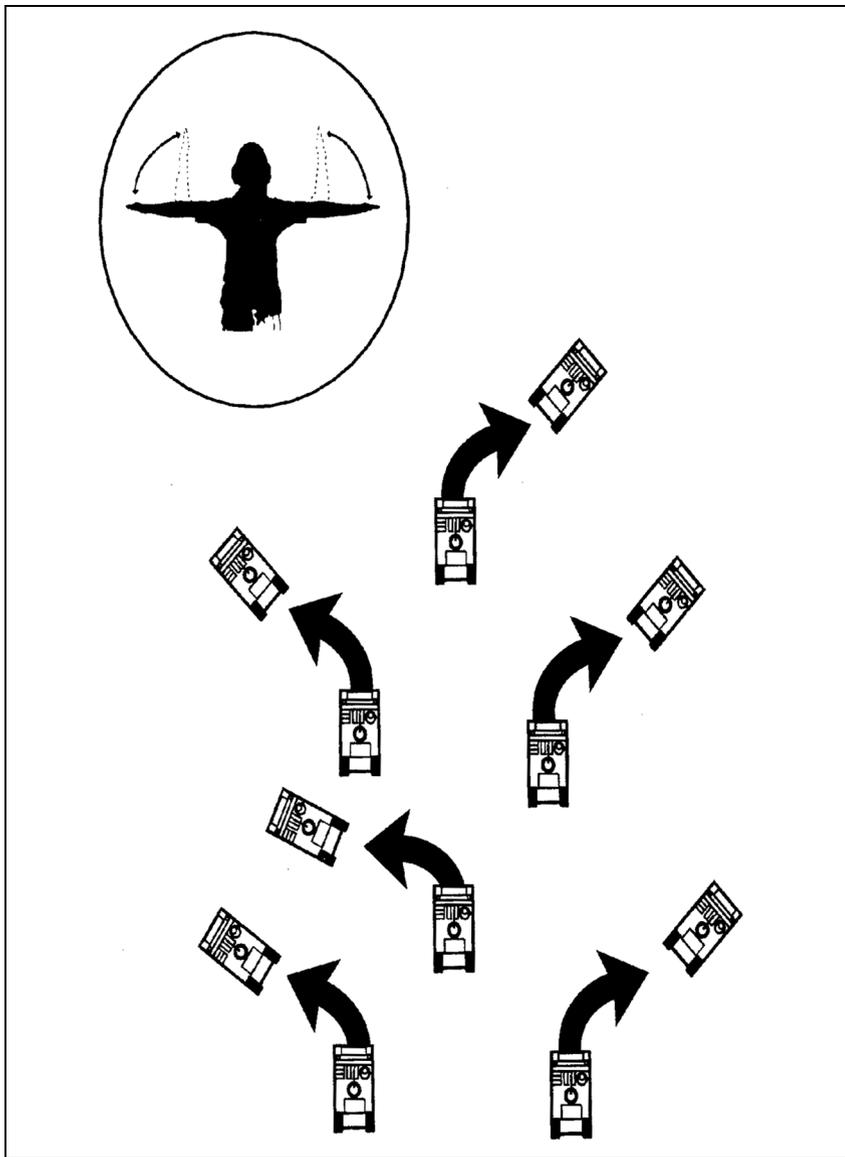


Figure 03-3-D0C18-4
Herringbone Formation From a Column of Wedges Formation

2. The squad/platoon halts in the herringbone or coil formation as directed. Each vehicle commander—
 - a. Ensures that his vehicle is correctly positioned, using cover and concealment.
 - b. Orders each vehicle operator to dismount (right or left).
 - c. Orders the distance to move to a covered/concealed position.
3. Vehicle operators dismount and assume hasty fighting positions to provide local security.
4. Vehicle commanders and dismounted vehicle operators observe their designated sectors of fire.

COACHING POINT:

1. The squad/platoon leader gives the arm-and-hand or flag signal or a command over the radio for the herringbone or coil formation. The squad/platoon halts.
2. Each vehicle commander ensures that his vehicle is correctly positioned, using cover and concealment.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-219-D60-MTP	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-10-MTP	03-3-1003	Conduct Smoke Operations
	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-30-MTP	03-3-1003	Conduct Smoke Operations
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-477-10-MTP	07-3-C211.03-1001	Move Tactically

2-14. Battle Drill 03-3-D0C14.**TASK:** Change Formation While Moving (03-3-D0C14)**CONDITIONS (CUE):** The squad/platoon is moving from one location to another to support combat operations. Based on the enemy situation during travel, the squad leader gives the appropriate signal to alert the drivers to change from one formation to another. (The squad/platoon leader uses arm-and-hand or flag signals or a radio to designate desired formation.)**STANDARDS:** The squad/platoon changes into the designated formation as directed by the squad leader.**SUPPORTING INDIVIDUAL TASKS:** See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-24-SMCT	071-326-0608	Use Visual Signalling Techniques
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	071-326-3001	Direct a Driver Over a Terrain Route
STP 3-54B2-SM	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-CST (ST)	071-326-3001	Direct a Driver Over a Terrain Route
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted

ILLUSTRATIONS: N/A**SETUP INSTRUCTIONS:**

1. Resources.

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC)/smoke equipment; communication equipment;

and ammunition.

- b. Maps and overlays.
2. Training Site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

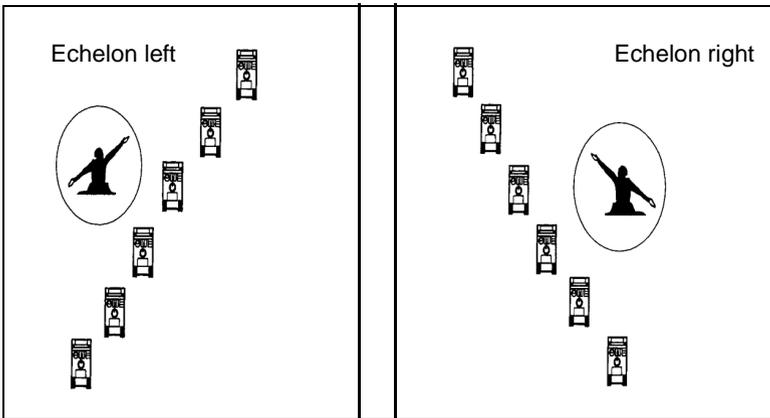
1. Orientation. The mission's objective is to choose the proper movement technique. The squad/platoon's situational awareness and battle-tracking skills are critical in choosing the right movement technique.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part on the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conduct-

ing a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The squad/platoon leader directs the formation change by giving the standard arm-and-hand or flag signals or by issuing a command over the radio, depending on type of vehicle used.
2. Vehicle commanders relay the appropriate signal and—
 - a. Direct drivers into position in the new formation.
 - b. Orient the machine guns toward likely enemy positions or assigned sectors.
3. The mounted formations are:
 - a. Echelon left/right (see *Figure 03-3-D0C14-1*).



**Figure 03-3-D0C14-1
Echelon Left/Right Formation**

- b. Wedge or column of wedges (see *Figure 03-3-D0C14-2*).
- c. Column or staggered column (see *Figure 03-3-D0C14-3*).
- d. Line (see *Figure 03-3-D0C14-4*).
- e. Vee or split vee (see *Figure 03-3-D0C14-5*).

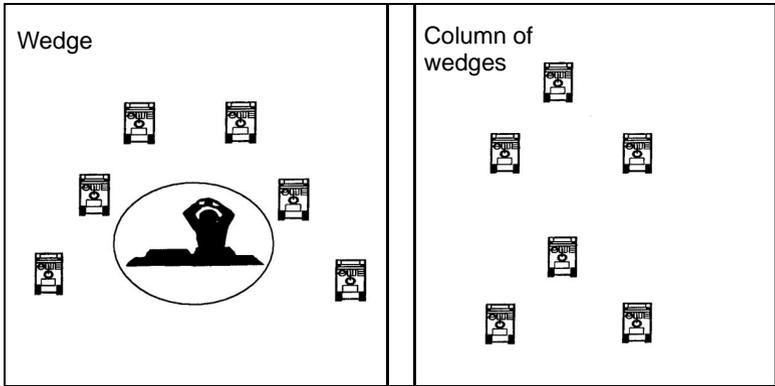


Figure 03-3-D0C14-2
Wedge or Column-of-Wedges Formation

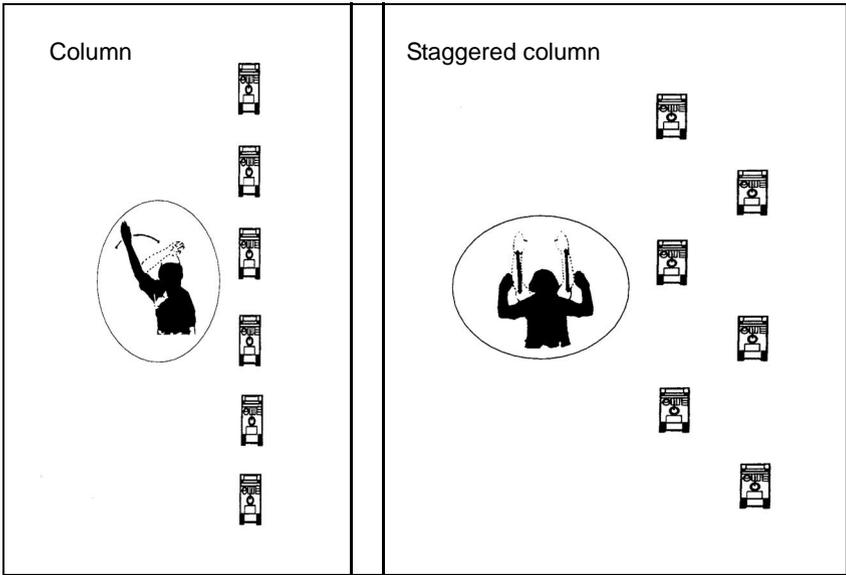


Figure 03-3-D0C14-3
Column or Staggered-Column Formation

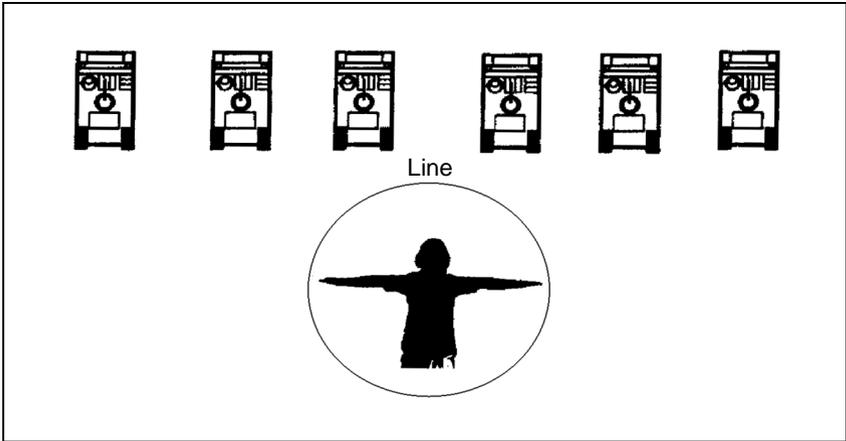


Figure 03-3-D0C14-4
Line Formation

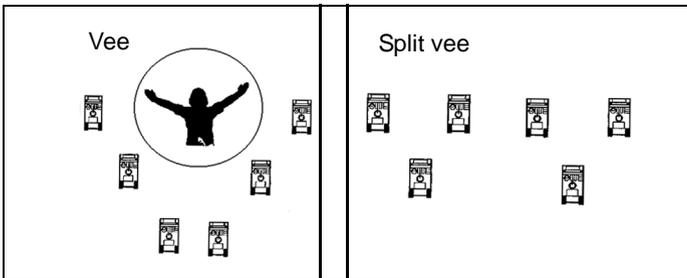


Figure 03-3-D0C14-5
Vee or Split-Vee Formation

COACHING POINT: Every member of the squad/platoon must know what movement technique to use according to the enemy situation. The squad/platoon must gather as much information on the enemy situation as possible. Proper battle tracking and updated graphics/overlays will keep the squad/platoon up to date on the enemy situation.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards

without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-219-D60-MTP	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-10-MTP	07-3-C211.03-1001	Move Tactically
	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-457-30-MTP	07-3-C227.03-1004	Perform a Tactical Road March
ARTEP 3-477-10-MTP	07-3-C211.03-1001	Move Tactically

Chapter 3

Drills

3-1. Description and Format for Crew Drills. A crew drill is a collective action that members of a crew of a weapon system or a piece of equipment must perform to use the weapon or piece of equipment successfully in combat or to preserve life. These drills are designed for execution by crews of reconnaissance vehicles found in a reconnaissance squad/platoon. These drills are slices of other drills or ARTEP tasks. Units that are able to accomplish these drills can execute their ARTEP tasks and their wartime mission with greater speed and accuracy.

a. **Drill Title.** This is the name of the drill. It describes the required action.

b. **Task.** The task is essentially the same as the drill title. It describes or names the task (required action) performed by the unit.

c. **Conditions.** This describes the situation, conditions, or environment under which the task is performed.

d. **Standards.** Standards identifies the terminal objective of the drill. This is an identifiable measure of how well the unit is to perform the task. These are actions which indicate how well the drill (task) is executed in terms of results or expected outcome. Standards are short, simple, clear, and are observable or measurable for evaluation purposes.

e. **Supporting individual task.** This is a representative list of tasks used to support the completion of the drill (collective task).

f. **Illustrations (As required).**

g. **Setup instructions.**

(1) **Resources.** This consists of personnel, TOE equipment, vehicles, NBC equipment, communications equipment, and ammunition. It covers all essential items of equipment to complete the drill (task).

(2) **Maps with overlays.**

(3) Training site. The training site should provide the following: An area large enough for a mounted squad/platoon to move cross country and sufficient natural vegetation and relief to permit movement by concealed routes.

(4) Unit instruction. As required.

h. Talk-through instruction.

(1) Orientation. This gives a short explanation of the mission and what the drill is intended to accomplish. The key factor for the success of drill completion is that the drill must be accomplished to standard with little or no subsequent decision-making process or orders from the unit leaders. The orientation also gives a brief description of the conditions or situation under which the drill is executed.

(2) Safety/Fratricide. The unit must observe all safety measures and precautions outlined in the unit safety SOP to include troop safety, protection of equipment, and environmental restrictions while conducting drill training. The unit must also observe all safety directives covered in the appropriate TMs and FMs.

(3) Demonstrations (optional). If another unit (squad/platoon) has successfully performed the drill, that unit may be used to demonstrate the performance of the drill. Explain the critical actions being performed and why these actions are critical and essential to performance of this training. Make sure you use all performance measures during the explanation. After the demonstration, summarize the strengths and weakness of the demonstration unit.

i. Explanation.

(1) Explain the objective of the drill in your own words.

(2) Unit leaders must be able to explain the duties of all soldiers in the squad/platoon. Ensure that everyone knows his duties and responsibilities pertaining to each portion of the drill.

(3) Unit leaders should make a sketch or diagram that explains the action required by each member in the squad/platoon.

(4) Unit leaders must be sure to clarify all unsolved issues

and questions of the unit members pertaining to the drill. This is essential before performing the drill. Each member must thoroughly understand the tasks he is to perform during the execution of the drill.

(5) Unit leaders should have each member involved in the drill explain his part in detail before performing the drill. Unit leaders are to make on-the-spot corrections as required.

j. Walk-through instructions (Use same procedure as listed in the talk through instructions).

(1) This is a most critical portion of drill training. During this phase of training, the unit leaders must move through the task slowly to ensure the unit is performing the drill, task steps, and performance measures to standard. Unit leaders must observe the drill participants carefully and make on-the-spot corrections as required. As the unit demonstrates greater proficiency in performing the drill correctly at the slow pace, have them to perform the drill at a faster pace; however, never sacrifice safety for speed.

(2) Initiating cue. The initiating cue is either the signal the unit leaders give or a trained response to an enemy action that cause the unit to perform the drill.

k. Task steps and performance measures. These are measurable or observable actions that the unit must perform to standard to complete the drill successfully.

l. Coaching points. If needed, correct the soldier after he completes a performance measure. Soldiers complete performance measures in sequence and like-numbered performance measures simultaneously.

m. Run-through instructions (Use same procedures as listed in the talk-through instructions). The unit leader or trainer should practice the drill with the unit until the unit can perform the drill according to the established standards without the drill book. The initial run-through should be conducted slowly. Soldiers change positions in order to learn all steps and standards in the drill.

n. Perform. When the soldiers can perform the drill according to established standards, the unit leaders should evaluate the unit as a whole to determine unit proficiency in performing the drill.

3-2. Crew Drill 03-3-D00C1.

TASK: Prepare for Operations (03-3-D00C1)

CONDITIONS (CUE): The reconnaissance unit is halted or located in an assembly area (AA) or a tactical position. The reconnaissance unit is alerted to prepare for the operation. The reconnaissance leader gives the order to prepare for operations.

STANDARDS: Each crew member conducts preventive-maintenance checks and services (PMCS) according to the equipment operator's manual. The on-board equipment and vehicles are prepared for operations in sufficient time to conduct the mission.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-331-0815	Practice Noise, Light, and Litter Discipline
	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	071-326-0515	Select a Movement Route Using a Map
	071-326-0608	Use Visual Signalling Techniques
	071-326-5705	Establish an Observation Post
	071-331-0820	Analyze Terrain
	071-332-5022	Prepare a Battalion Situation Report (SITREP)
STP 3-54B1-SM	441-091-1040	Visually Identify Threat Aircraft
	031-503-3005	Submit NBC 1 Report
	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)

References	Task Number	Task Title
	031-516-1013	Perform PMCS on the M93 NBCRS (FOX)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1017	Perform PMCS on the Double Wheel Sampler Unit
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1023	Escape From the M93 NBCRS (FOX)
	031-516-1025	Change the Overpressure System Filters on the M93 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1030	Operate the M21 Chemical Agent Alarm (Dismounted)
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-5502	Issue a Fragmentary Order
STP 3-54B2-SM	031-507-2039	Conduct NBC Reconnaissance
	031-516-2001	Operate the Vehicle Orientation System (VOS)- 25

References	Task Number	Task Title
	031-516-2002	Perform PMCS on the Vehicle Orientation System (VOS)-25
	031-516-2036	Emplace the M21 Remote Sensing Chemical Agent Alarm (RSCAAL)
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5505	Issue an Oral Operations Order
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
STP 3-54B34-SM-TG	071-326-5610	Conduct Movement Techniques by a Squad
	171-123-4000	Plan the Occupation of an Assembly Area
	171-123-4005	Conduct the Occupation of an Assembly Area
STP 3-CST (ST)	031-503-3005	Submit NBC 1 Report
	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-507-2039	Conduct NBC Reconnaissance
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1013	Perform PMCS on the M93 NBCRS (FOX)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1017	Perform PMCS on the Double Wheel Sampler Unit

References	Task Number	Task Title
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1023	Escape From the M93 NBCRS (FOX)
	031-516-1025	Change the Overpressure System Filters on the M93 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1030	Operate the M21 Chemical Agent Alarm (Dismounted)
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	031-516-2002	Perform PMCS on the Vehicle Orientation System (VOS)-25
	031-516-2036	Emplace the M21 Remote Sensing Chemical Agent Alarm (RSCAAL)
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5502	Issue a Fragmentary Order

References	Task Number	Task Title
	071-326-5505	Issue an Oral Operations Order
	071-326-5610	Conduct Movement Techniques by a Squad
	071-329-1030	Navigate From One Point on the Ground to Another Point, Mounted
	171-123-4000	Plan the Occupation of an Assembly Area
	171-123-4005	Conduct the Occupation of an Assembly Area

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:
 - a. Tables(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of the available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this drill is to prepare a plan using the following troop-leading procedures:
 - a. Receive the mission.
 - b. Issue a warning order (WO).

- c. Make a tentative plan.
 - d. Begin movement.
 - e. Reconnoiter.
 - f. Complete the plan.
 - g. Issue an operations order (OPORD).
 - h. Supervise and refine the unit's actions.
2. Safety/Fratricide. Safety is the number one priority while preparing for operations.
 3. Demonstration (optional).
 4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the battle drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The reconnaissance leader issues a WO.
2. The reconnaissance leader conducts a reconnaissance (map inspection) of the area of operation (AO).
 - a. The reconnaissance leader prepares map overlays.
 - b. The reconnaissance leader prepares strip maps of routes and issues them to vehicle commanders.
 - c. The reconnaissance leader briefs the unit on the mission.

3. The squad leaders, vehicle commanders, and crew members conduct precombat inspection.

a. The unit leader ensures that equipment is loaded in the vehicles.

b. The vehicle commander ensures the multipurpose, integrated chemical agent detector (MICAD), the AN PSN-11 (Plugger), and a radio are prepared for operation.

c. Operator #1 and the driver perform PMCS on all built-in or on-board nuclear, biological, and chemical (NBC) equipment.

d. The vehicle commander inspects the machine gun and supervises and spot checks the preparation of crew members.

e. The squad leaders use current load plans to ensure that vehicles are loaded properly for sustained operations.

f. Make radio checks and use proper call signs.

4. The squad leaders ensures that all equipment faults are corrected on the spot and report all deficiencies to the platoon leader/platoon sergeant.

5. The reconnaissance leader notifies headquarters (HQ) when the preparation is completed.

COACHING POINT: To prepare for operations, it is very important that the platoon leadership follow the basic troop-leading procedures. These procedures must also be performed by the squad leaders.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-117-40-MTP	03-3-C202	Prepare for a Chemical Attack
ARTEP 3-117-D40-MTP	03-3-C202	Prepare for a Chemical Attack
ARTEP 3-207-10-MTP	03-3-1030	Plan and Prepare for NBC Reconnaissance/ Survey Operations
	03-3-1040	Prepare for Future Operations
	03-3-C202	Prepare for a Chemical Attack
ARTEP 3-219-D60-MTP	03-3-1040	Prepare for Future Operations
	03-3-C202	Prepare for a Chemical Attack
ARTEP 3-457-10-MTP	03-3-1040	Prepare for Future Operations
	03-3-C202	Prepare for a Chemical Attack
ARTEP 3-457-30-MTP	03-3-C202	Prepare for a Chemical Attack
ARTEP 3-477-10-MTP	03-3-C202	Prepare for a Chemical Attack

3-3. Crew Drill 03-3-D00C2.

TASK: React to a Detection (03-3-D00C2)

CONDITIONS (CUE): The nuclear, biological, and chemical (NBC) reconnaissance element is conducting reconnaissance when the alarm goes off. The reconnaissance unit immediately begins to monitor for contamination hazards within the area of operations (AO). The vehicle commander gives the order to perform the actions required to react to the detection.

STANDARDS: The vehicle commander halts the vehicle and ensures that operator #1 begins to monitor to detect contamination. The vehicle commander informs the supported unit that it has received an alarm. Operator #1 tells operator #2 when to lower the probe for detection and the substance verification. Operator #2 ensures that at least one sampler wheel maintains contact with the ground during reconnaissance missions. Operator #1 conducts spectrum analysis after a reading of 4 or higher is detected. Operator #1 then prints a readout for known agents and adds the substance to the monitor list. Operator #1 ensures that the spectrum is deleted from the monitor list if the spectrum has equal or lower intensities than the reference agent. Operator #1 deletes the reference agent from the monitor list if the spectrum has equal or higher intensities than the reference agent. Operator #2 ensures that the probe is raised and lowered as directed.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	071-331-0815	Practice Noise, Light, and Litter Discipline
STP 21-24-SMCT	031-503-3008	Implement Mission Oriented Protective Posture (MOPP)
	031-503-3008D	Implement Mission Oriented Protective Posture (MOPP)
	031-503-3010	Supervise Employment of NBC Markers

References	Task Number	Task Title
	031-506-1053	Report NBC Information Using NBC 4 Report
	071-326-0515	Select a Movement Route Using a Map
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1023	Escape From the M93 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	071-326-5502	Issue a Fragmentary Order
STP 3-54B2-SM	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	031-516-2036	Emplace the M21 Remote Sensing Chemical Agent Alarm (RSCAAL)
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5505	Issue an Oral Operations Order
STP 3-54B34-SM-TG	071-410-0019	Control Organic Fires

References	Task Number	Task Title
STP 3-CST (ST)	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1023	Escape From the M93 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	031-516-2036	Emplace the M21 Remote Sensing Chemical Agent Alarm (RSCAAL)
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5502	Issue a Fragmentary Order
	071-326-5505	Issue an Oral Operations Order
	071-410-0019	Control Organic Fires

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:

- a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site. Training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of the available cover and concealment.
 3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this drill is to begin to monitor for contamination as rapidly as possible. The squad/platoon's ability to rapidly react to detection is critical to its success on the battlefield.
2. Safety/Fratricide. Ensure that—
 - a. Drivers are briefed to employ safe cross-country driving procedures.
 - b. Terrain- and weather-related hazards associated with the cross-country movement are identified.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their

assigned task by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

2. Initiating cue. The drill begins when the platoon leader gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The drivers operate the vehicles at a specified speed limit.

2. The vehicle commanders navigate using automatic navigation (ANAV), an ANPVS-11 (Plugger), a map, and terrain association.

3. The vehicle commander continues to monitor the current situation.

4. The mobile mass spectrometer (MM1) operator (surveyor), if nuclear, biological, and chemical reconnaissance system (NBCRS) is used:

a. Continues to observe the MM1 screen.

b. Informs the vehicle commander immediately of any observed activity occurring on the screen (MM1).

c. Informs the vehicle commander when the alarm goes off.

d. Changes the monitoring mode from WHEEL/HIGH to SURFACE/LOW.

e. Performs the temperature program and back flush procedures to remove any residue still left in the MM1.

f. Allows the temperature to drop to 120 degrees centigrade.

g. The surveyor lowers the probe 10 centimeters (cm) from the ground to detect a spectrum acquisition and substance verification.

h. Monitors the MM1 screen for a reading of 4 or higher.

i. Notifies operator # 2 to raise the probe to the traveling position if a reading of 4 or higher is detected.

j. Takes the spectrum after a reading higher than 4 is detected.

k. Prints information on any known or unknown agents.

- l. Adds the substance to the monitor list.
 - m. Deletes the spectrum from the monitor list if the spectrum has equal or lower intensities than the reference agent.
 - n. Deletes the reference agent from the monitor list if the spectrum has equal or higher intensities than the reference agent.
 - o. Informs the vehicle commander of the actual findings.
 - p. Changes the monitoring mode from SURFACE/LOW to AIR/HIGH.
 - q. Allows the temperature to reach 180 degrees centigrade during substance verification.
5. The surveyor—
 - a. Raises and lowers the sampler wheels during reconnaissance operations.
 - b. Ensures that one sampler wheel remains in contact with the ground during reconnaissance operations.
 - c. Ensures that one sampler wheel remains in contact with the probe for three to four seconds.
 - d. Collects samples as required.
 - e. Prepares and emplaces contamination markers as required.
 6. The reconnaissance leader or vehicle commander submits an NBC 4 report to higher headquarters (HQ) on the current status.
 7. The reconnaissance leader requests new instructions and guidance from HQ or follows instructions in the current operation order (OPORD).

NOTE: The multipurpose integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

COACHING POINT: Every member of the squad/platoon must know how to perform this crew drill. All members must perform all duties equally. All of the information put into the MM1 must be correct before the readout is printed.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-117-40-MTP	03-3-C203	Respond to a Chemical Attack
ARTEP 3-117-D40-MTP	03-3-C203	Respond to a Chemical Attack
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-1041	Conduct a Radiological Survey
	03-3-C203	Respond to a Chemical Attack
ARTEP 3-219-D60-MTP	03-3-C225	Conduct Chemical Reconnaissance
	03-3-1035	Conduct a Radiological Reconnaissance
	03-3-C203	Respond to a Chemical Attack
ARTEP 3-457-10-MTP	03-3-C203	Respond to a Chemical Attack
	03-3-C225	Conduct Chemical Reconnaissance

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-457-30-MTP	03-3-C203	Respond to a Chemical Attack
ARTEP 3-477-10-MTP	03-3-C203	Respond to a Chemical Attack

3-4. Crew Drill 03-3-D00C3.**TASK:** Collect a Chemical or Biological Sample (03-3-D00C3)**CONDITIONS (CUE):** You are given an area contaminated with chemical or biological agents, a reconnaissance vehicle; individual nuclear, biological, and chemical (NBC) protective clothing; and the requirement to collect selected samples from specific sites. The crew will assume mission-oriented protection posture (MOPP 2 if in NBC reconnaissance system [NBCRS]) before entering the area of contamination. This task can be performed in MOPP4 if overpressure system fails. The reconnaissance unit is ordered to collect chemical or biological samples within an area.**STANDARDS:** Collect samples without spreading contamination to the inside of the reconnaissance vehicle. Individual will wear NBC protective clothing, and is required to collect selected samples from specific sites. The crew will assume MOPP 2 before entering the area of contamination. This task can be performed in MOPP4 if overpressure system fails.**SUPPORTING INDIVIDUAL TASKS:** See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-24-SMCT	031-503-3008	Implement Mission Oriented Protective Posture (MOPP)
	031-503-3008D	Implement Mission Oriented Protective Posture (MOPP)
	031-506-1053	Report NBC Information Using NBC 4 Report
STP 3-54B1-SM	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-507-1022	Decontaminate Equipment Using M13 Decontaminating Apparatus, Portable
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)

References	Task Number	Task Title
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1022	Extinguish a Fire on the M93 NBCRS (FOX)
	031-516-1023	Escape From the M93 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	071-326-3001	Direct a Driver Over a Terrain Route
STP 3-54B2-SM	031-516-2002	Perform PMCS on the Vehicle Orientation System (VOS)-25
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
STP 3-54B34-SM-TG	031-506-2062	Plan NBC Sampling Operations
	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-504-1012	Operate the XM-27 Multipurpose Integrated Chemical Agent Alarm (MICAD)
	031-506-2062	Plan NBC Sampling Operations
	031-507-1022	Decontaminate Equipment Using M13 Decontaminating Apparatus, Portable

References	Task Number	Task Title
	031-516-1003	Perform PMCS on the Mobile Mass Spectrometer (MM1)
	031-516-1004	Operate the Mobile Mass Spectrometer (MM1)
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1022	Extinguish a Fire on the M93 NBCRS (FOX)
	031-516-1023	Escape From the M93 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-2002	Perform PMCS on the Vehicle Orientation System (VOS)-25
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-410-0019	Control Organic Fires

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:

a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.

b. Maps and overlays.

- c. All equipment needed for NBC samples.
2. Training site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move either cross-country or on existing road networks.
 - b. Enough natural vegetation and terrain relief to allow the squad to select a route that makes use of the available cover and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of the drill is to rapidly collect NBC samples, without the spread of contamination to the inside of the vehicle.
2. Safety/Fratricide.
 - a. Monitor for heat injuries if performed in MOPP4.
 - b. Ensure that drivers are briefed to employ safe cross-country driving procedures.
 - c. Identify terrain- and weather-related hazards associated with cross-country movement.
3. Demonstration (optional).
4. Explanation.
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the drill.

WALK-THROUGH INSTRUCTIONS: The squad/platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

TASK STEPS AND PERFORMANCE MEASURES:

1. The surveyor loads all required NBC reconnaissance, survey, and sampling (M34 biological sampling kit, M272 water test kit) equipment into vehicles according to the standing operating procedure (SOP) and the vehicle load plans.
 - a. Attaches M9 detector paper to vehicles and equipment.
 - b. Covers exposed equipment with plastic or canvas.
 - c. Covers internal areas of vehicles for the soldiers who may have to dismount vehicles.
 - d. Removes all external gear and equipment not required for missions.
 - e. Places sandbags on the floors of the vehicles for additional shielding, if radiological contamination is possible.
 - f. Verifies that all soldiers are at the appropriate MOPP level for the mission.

NOTE: To reduce performance degradation due to MOPP, the leader does a MOPP analysis to determine the appropriate MOPP level for the tactical movement to the mission start point.

2. The leader ensures that M9 detector paper is attached to all soldiers.
3. The leader ensures that soldiers carry individual NBC reconnaissance equipment that they must operate.
4. The leader moves using appropriate movement techniques on a covered and concealed route.
5. The drivers stop vehicles at selected intervals along the route or in areas with visual indicators of chemical or biological hazards to collect samples. The surveyor collects samples upon observing:
 - a. Craters caused by bursting munitions or fragmentation of projectiles.
 - b. Unusual liquid droplets.

- c. Oily film on the surface of the water.
 - d. Discoloration of the topsoil.
 - e. Dead and discolored vegetation.
 - f. An absence or lack of insect and animal life.
 - g. Dead animals and birds.
6. The surveyor collects two types of environmental samples.

NOTE: If performing the mission in the NBCRS, the following procedures apply:

7. The surveyor prepares sample vials for the sampling mission.
- a. Marks the mission control number on vials.
 - b. Marks the sample number on vials.
 - c. Records all numbers in the team's mission log book.
 - d. Mounts protective work in the glove port.
 - e. Inserts the left arm into the work glove.
 - f. Releases the latch on the sample tray and pulls the tray out to the fully extended position.
 - g. Opens the sample vial.
 - h. Grasps the gripper tongs by the handle and slides the tongs out of the tray.
 - i. While watching through the floor window, uses the tongs to grasp the sample from the ground and places it in the vile.
 - j. Replaces the tongs in the tray, and replaces the cap on the vial.
 - k. Transfers the samples to the proper organization according to the SOP at the end of the mission.
 - l. Marks the contaminated area, and submit an updated NBC 4 report.

NOTE: The multipurpose, integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher headquarters (HQ).

COACHING POINT: The platoon leadership must employ the proper troop-leading procedures. The squad leaders must complete a thorough precombat inspection to prepare the equipment for the mission. The squad/platoon SOP may cover all checks that must be made before the mission.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-207-10-MTP	03-2-C310	Conduct A Chemical Survey
	03-3-1034	Conduct Biological Sampling Operations

3-5. Crew Drill 03-3-D00C4.

TASK: Camouflage a Vehicle (03-3-D00C4)

CONDITIONS (CUE): The vehicle is stopped and stationary for several hours or is parked in a tactical position. (The vehicle commander gives the order to the crew to camouflage vehicles.)

STANDARDS: The vehicle is camouflaged within 25 minutes, and the camouflage equipment is disassembled and stored within 25 minutes.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1399	Camouflage a Vehicle

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources.
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment; weapons; vehicles; nuclear, biological, and chemical (NBC)/smoke equipment; communication equipment; and ammunition.
 - b. Maps and overlays.
2. Training Site. The training site should provide the following:
 - a. An area large enough to allow for freedom of movement and suitable for camouflaging operations.
 - b. Sufficient natural vegetation and relief to permit accessibility, cover, and concealment.
3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The mission's objective is to rapidly camouflage

the vehicle. The squad/platoon's ability to rapidly camouflage vehicles is critical to its success on the battlefield.

2. **Safety/Fratricide.** All soldiers must use three points of contact while on top of the vehicles. Ground guides will always be used to move the vehicles under the camouflage net.
3. **Demonstration (optional).**
4. **Explanation.**
 - a. Use the performance measures as a guide, and in your own words, explain the actions of each squad.
 - b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.
 - c. Answer all questions about the crew drill.
 - d. Have the platoon sergeant, squad leaders, and drivers explain their part in the drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.
2. **Initiating cue.** The drill begins when the platoon leader gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The crew sets up the camouflage nets. Crew members—
 - a. Lay out the camouflage net.
 - b. Stake down the edge of the net.
 - c. Prepare the support system.
 - d. Lift the net at the designated opening and place the support poles.
 - e. Drive the vehicle under the net through the designated opening, using a ground guide, and place the rest of the support poles.

2. The crew tears down and stows the camouflage nets. Crew members—
 - a. Open the entrance, and using a ground guide, drive the vehicle out.
 - b. Lift the net at the entrance and remove the support poles.
 - c. Remove the stakes and stow the support system.
 - d. Fold and stow the nets.

COACHING POINT: Every member of the squad/platoon must know how to camouflage the vehicle. Teamwork is very important to accomplish this task to the standards. All soldiers must know how to properly sew the camouflage nets together and cover the vehicle to the standards.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill until they can perform the drill according to the standards without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to the standards, the platoon or section leader should evaluate them.

Supported T&EOs

ARTEP Number	T&EO Number	T&EO Task Title
ARTEP 3-457-10-MTP	05-3-0210.03-1001	Camouflage Vehicles and Equipment
ARTEP 3-457-30-MTP	05-3-0210.03-1001	Camouflage Vehicles and Equipment
ARTEP 3-477-10-MTP	05-3-0210.03-1001	Camouflage Vehicles and Equipment

3-6. Crew Drill 03-3-D00C5.

TASK: Conduct Nuclear, Biological, and Chemical (NBC) Reconnaissance in Military Operations on Urbanized Terrain (MOUT) (03-3-D00C5)

CONDITIONS (CUE): The platoon/squad receives an operation order (OPORD)/fragmentary order (FRAGO) to conduct NBC reconnaissance in a built-up area. The reconnaissance element has communications with higher and adjacent units. The platoon/squad has been provided guidance on the rules of engagement (ROE) and the rules of interaction (ROI). Coalition forces and noncombatants may be present in the operational environment. The squad leader receives a warning order (WO) or FRAGO to perform this mission from the platoon leader.

STANDARDS: The platoon reconnoiters the built-up area in accordance with the tactical standard operating procedure (TSOP), the WO or FRAGO, and/or the commander's guidance. All NBC reports are sent up to higher headquarters (HQ). The leader selects the reconnaissance method based on the mission, enemy, terrain, troops time available, and civil considerations (METT-TC). The platoon/squad complies with the ROE and/or ROI.

SUPPORTING INDIVIDUAL TASKS: See also *Appendix A*, "Conversion Chart (United States to Metric)."

References	Task Number	Task Title
STP 21-1-SMCT	551-721-1359	Drive Vehicle in a Convoy
STP 21-24-SMCT	031-503-3010	Supervise Employment of NBC Markers
	071-326-0515	Select a Movement Route Using a Map
	071-326-5630	Conduct Movement Techniques by a Platoon
	071-331-0820	Analyze Terrain
STP 3-54B1-SM	031-503-1030	Prepare the Chemical Agent Monitor for Operation

References	Task Number	Task Title
	031-503-1031	Use the Chemical Agent Monitor
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	071-326-3001	Direct a Driver Over a Terrain Route
STP 3-54B2-SM	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	171-122-1030	Apply Immediate Action on an M240 Machine Gun
STP 3-54B34-SM-TG	071-326-5610	Conduct Movement Techniques by a Squad
	071-410-0019	Control Organic Fires
STP 3-CST (ST)	031-503-1030	Prepare the Chemical Agent Monitor for Operation
	031-503-1031	Use the Chemical Agent Monitor
	031-516-1014	Drive the M93 NBCRS (FOX)
	031-516-1018	Operate the Double Wheel Sampler Unit

References	Task Number	Task Title
	031-516-1019	Employ NBC Markers Using the M93/M93A1 NBCRS (FOX)
	031-516-1020	Collect NBC Samples Using the M93/M93A1 NBCRS (FOX)
	031-516-1026	Drive the M93 NBCRS (FOX) Using Night Viewer and Vision Blocks
	031-516-1031	Operate the M21 Chemical Agent Alarm (Mounted)
	031-516-2001	Operate the Vehicle Orientation System (VOS)-25
	071-326-3001	Direct a Driver Over a Terrain Route
	071-326-3049	Conduct Troop-Leading Procedures for an Operation
	071-326-5610	Conduct Movement Techniques by a Squad
	071-410-0019	Control Organic Fires
	171-122-1030	Apply Immediate Action on AN M240 Machine Gun

ILLUSTRATIONS: N/A

SETUP INSTRUCTIONS:

1. Resources:
 - a. Table(s) of organization and equipment (TOE) assigned personnel and equipment.
 - b. Maps and overlays.
2. Training site. The training site should provide the following:
 - a. An area large enough for a mounted squad/platoon to move through an urban terrain environment. The road networks must support the mounted maneuver.

b. Enough terrain relief to allow the squad to select a route that makes use of the available cover and concealment.

3. Unit Instructions. None.

TALK-THROUGH INSTRUCTIONS:

1. Orientation. The objective of this battle drill is to rapidly locate contamination in urban terrain. In urban areas, terrain such as flat concrete, asphalt, parking lots, and multiple-lane roads pose special considerations.

2. Safety/Fratricide. Ensure that drivers are briefed to employ safe maneuver procedures through the urban terrain. Stress that special emphasis must be taken while driving in heavy traffic areas and narrow mobility corridors. Additionally, coordinate all movements and routes with friendly units in the vicinity to prevent fratricide.

3. Demonstration (optional).

4. Explanation.

a. Use the performance measures as a guide, and in your own words, explain the action of each squad.

b. Illustrate the drill with a sketch, a sand table, or a simple diagram in the dirt.

c. Answer all questions about the battle drill.

d. Have the platoon sergeant, squad leaders, and drivers explain their part in the battle drill.

WALK-THROUGH INSTRUCTIONS:

1. The platoon leader ensures that all teams can perform their assigned tasks by conducting a walk-through of all drill tasks. Time standards are disregarded for the instructions.

2. Initiating cue: The drill begins when the platoon leader gives the predetermined signal.

TASK STEPS AND PERFORMANCE MEASURES:

1. The platoon leader gains and or maintains situational

awareness (SA) using communications, maps, intelligence summaries, and situation reports (SITREPs). The platoon leader may use the Force XXI Battle Command Brigade and Below (FBCB2) System if available.

2. The platoon leader determines requirements for the reconnaissance.

a. Plans the reconnaissance using troop-leading procedures.

b. Verifies requirements with higher HQ using the FBCB2 System, a field manual (FM), or other tactical means.

c. Reviews the priority intelligence requirements (PIR) that the platoon must accomplish.

d. The reconnaissance leader coordinates with friendly units in the vicinity of the area of operations to prevent fratricide.

e. The reconnaissance leader coordinates for security depending on the threat.

f. The reconnaissance leader gains and or maintains SA using communications, maps, intelligence summaries, and SITREPs. The leader may use the FBCB2 System if available.

3. The platoon leader identifies the access and egress routes of the urban terrain.

a. The reconnaissance unit moves along a designated route checking for contamination.

b. The reconnaissance unit determines a bypass route if contamination is detected.

4. The platoon leader identifies surveillance positions within the urban area.

5. The platoon leader identifies possible NBC hazard sites to include—

a. Hospitals.

b. Toxic industrial chemical (TIC) sites.

c. Toxic industrial material (TIM) sites.

- d. Nuclear power plants.
 - e. Laboratories.
6. Once contamination is detected, the reconnaissance leader identifies/verifies the agent.
 7. The reconnaissance unit provides area security and marks the near side of the contamination 200 meters from the edge.
 8. The platoon leader submits an NBC 4 report to higher HQ.
 9. The platoon leader requests further mission instructions and decontamination support if needed.

NOTE: The multipurpose, integrated chemical agent detector (MICAD) automatically formats and transmits NBC 4 reports to higher HQ.

COACHING POINT: The objective of this drill is to conduct NBC reconnaissance in urban terrain. Considerations must be taken when performing military operations in urban terrain (MOUT). Air currents are unpredictable. Obstructions tend to break up the agent cloud or NBC hazards. The urban environment may also contain civilians and noncombatants. The leader must provide guidance on the ROE to every soldier in the platoon.

RUN-THROUGH INSTRUCTIONS: The soldiers should practice this drill according to the standard without the drill book. The initial run-through should be conducted slowly. The soldiers should change positions in order to learn all steps and standards.

PERFORM: When the soldiers can perform this drill according to standard, they should be evaluated by the platoon or section leader.

Appendix A

Metric Conversion Chart

Table A-1. Conversion Chart (United States to Metric)

US Units	Multiplied By	Equals Metric Units
Length		
Feet	0.30480	Meters
Inches	2.54000	Centimeters
Inches	0.02540	Meters
Inches	25.40010	Millimeters
Miles (statute)	1.60930	Kilometers
Miles per hour	0.0447	Meters per second
Yards	0.91400	Meters
Volume		
Cubic feet	0.02830	Cubic meters
Cubic yards	0.76460	Cubic meters
Weight		
Pounds	453.59000	Grams
Pounds	0.45359	Kilograms
Length		
Centimeters	0.39370	Inches
Meters per second	2.23700	Miles per hour
Millimeters	0.03937	Inches
Kilometers	0.62137	Miles (statute)
Meters	3.28080	Feet
Meters	39.37000	Inches
Meters	1.09360	Yards
Volume		
Cubic meters	35.31440	Cubic feet
Cubic meters	1.30790	Cubic yards
Weight		
Kilograms	2.20460	Pounds

GLOSSARY**Section I. Abbreviations**

AA	assembly area; antiaircraft
AAR	after-action review
AI	Area of Interest
AMTP	ARTEP Mission Training Plan
AO	area of operation
ARTEP	Army Training and Evaluation Program
AT	antiterrorism; antitank
ATGM	antitank guided missile
ATTN	attention
BIO	biological
CAM	chemical agent monitor
cm	centimeter(s)
DA	Department of the Army; Denmark; direct action
decon	decontamination
FBCB2	Force XXI Battle Command Brigade and Below
FM	field manual; frequency modulated/modulation
FMs	Field manuals
FRAGO	fragmentary order
G2	Assistant Chief of Staff, G2 (Intelligence)
GB	nerve agent
H	blister agent
HQ	headquarters
IAW	In Accordance With

LD	line of departure
LOA	Letter of Agreement; line of advance
METT-TC	mission, enemy, terrain, troops, time available, and civilian considerations
MICAD	multipurpose, integrated chemical agent detector
MM	millimeter
MM1	mobile mass spectrometer
MOPP	mission-oriented protection posture
MOPP 4	mission-oriented protection posture, level 4
MOS	military occupational specialty
MUT	military operations on urbanized terrain
NBC	nuclear, biological, chemical
NBCRS	Nuclear, Biological, and Chemical Recon System.
NCOIC	noncommissioned officer in charge
O/C	observer/controller
OIC	officer in charge
OP	observation post
OPFOR	opposing forces
OPORD	operation order
PIR	priority intelligence requirements
PMCS	preventive-maintenance checks and services
PSG	platoon sergeant
recon	reconnaissance
ROE	rules of engagement
ROI	rules of interaction
RSCAAL	remote sensing chemical agent automatic alarm

SITREP	situation report
SOP	standing operating procedure
SPOTREP	spot report
TIC	toxic industrial chemical
TIM	toxic industrial material
TM	technical manual; team
TMs	Technical manuals
TOE	table(s) of organization and equipment
TRADOC	United States Army Training and Doctrine Command
TSOP	tactical standing operating procedure
US	United States
VOS	Vehicle Orientation System
WO	Warrant Officer; warning order

Section II. Terms

Drill. A disciplined, repetitious exercise to teach and perfect a skill or procedure. Drills are linked to Mission Training Plans in that they are a method for executing a collective task or task step. There are two types: Battle Drill--A collective action executed in a standard manner throughout the Army by a platoon or smaller element without the application of a deliberate decision making process. The action is vital to success in combat or critical to preserving life. The drill is initiated on a cue, such as an enemy action or simple leader's order, and is a trained response to the given stimulus. It requires minimal leader orders to accomplish and is standard throughout like units in the Army. Crew Drill--A collective action that a crew of a weapon or piece of equipment must perform to use the weapon or equipment successfully in combat or to preserve life. This action is a trained response to a given stimulus such as a simple leader order or the status of the weapon or equipment. It requires minimal leader orders to accomplish and is standard throughout the Army.

Fox. M93 NBC Reconnaissance System

Marking. Indicate entries to and exists from contaminated areas to protect friendly units. Standard NBC markers are used to keep troops from wandering accidentally into contaminated areas.

Risk assessment. The process used to identify potential hazard associated with training, set values on the risk elements, compare risks against training benefits, and eliminate unnecessary risks. It is an expression of potential loss in terms of hazard severity, accident probability, and exposure to hazard.

References

Required Publications

Required publications are sources that users must read in order to understand or to comply with this publication.

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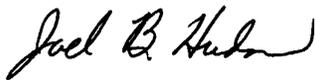
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